

ESSAYS

ON

INDIAN ANTIQUITIES,

HISTORIC, NUMISMATIC, AND PALÆOGRAPHIC,



BY

EDWARD THOMAS,





121

RAMA VARMA RESEARCH INSTITUTE,  
TRICHUR, COCHIN STATE.



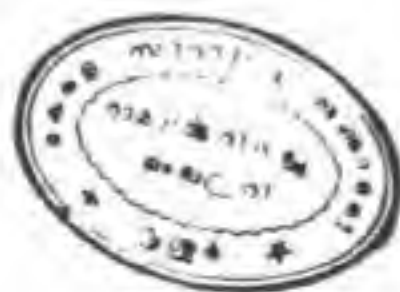


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ESSAYS



# INDIAN ANTIQUITIES,

HISTORIC, NUMISMATIC, AND PALEOGRAPHIC,

OF THE LATE

JAMES PRINSEP, F.R.S.,

SECRETARY TO THE ASIATIC SOCIETY OF BENGAL.

TO WHICH ARE ADDED HIS

## USEFUL TABLES,

ILLUSTRATIVE OF INDIAN HISTORY, GEOGRAPHY, MODERN NUMISMATICS, WEIGHTS,

EDITED WITH NOTES, AND ADDITIONAL MATTER,

BY  
EDWARD THOMAS,

LATE OF THE REGIMENTAL CIVIL SURVEYOR GENERAL OF THE ARMY DISTRICT OF CALCUTTA,  
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## NUMISMATIC ESSAYS.

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### XVII.—APPLICATION OF THE EARLY BHILSA ALPHABET TO THE BUDDHIST GROUP OF COINS.

[7th JUNE, 1837.]

Having once become possessed of the master-key of this ancient alphabet, I naturally hastened to apply it to all the doors of knowledge hitherto closed to our access. Foremost among these was the series of coins conjecturally—and, as it now turns out, correctly—designated as the Buddhist series; and of these, the beautiful coin discovered by Lieut. Conolly, at Kanauj, attracted the earliest notice from the very perfect execution and preservation of the legend; [see pl. vii., fig. 1, vol. I., p. 115]. The reading of this coin was now evident at first sight, as *𑀧𑀺𑀢𑀺𑀓 Vipra-devasa*; which, converted into its Sanskrit equivalent, will be *विप्रदेवस्य Vipra-devasya*, '(the coin) of Vipra-deva.' On reference to the chronological tables, we find a Vipra in the Magadha line, the tenth in descent from Jarasandha, allotted to



the eleventh century before the Christian era ! Without laying claim to any such antiquity, we may at least bespeak for our Vipra-deva a place in the Indu-vansa line of Magadha, and a descent from the individual of the same name in the Paurānic lists.

[ I regret to have to disturb this identification, but the new reading of the name on the coin, as *Vishnu-deva*, is distinct and positive ! Prinsep himself, it will be seen hereafter, amended his first form of  $\mathfrak{v} = \text{ph}$ , to  $\mathfrak{v}$ , [see pl. xxxvii.] The true letter on the coin is the old equivalent of  $\mathfrak{v}$   $\mathfrak{a}$ , which does not seem to have been met with in either the Lā character or that of the Western caves, though Dr. Stevenson gives the letter in its present shape among what he terms Satrap characters.—*Jour. Bombay Br. As. Soc.*, July, 1853, pl. xvii.]

Other coins depicted in former plates may, in a similar manner, be read by the new alphabet.

The small bronze coins of Behat (fig. 5, pl. [iv.] xviii., vol. iii. and fig. 13 of pl. [xix.] xxxiv., vol. iv.) have the distinct legend  $\mathfrak{m}\mathfrak{h}\mathfrak{r}\mathfrak{a}\mathfrak{j}\mathfrak{a}$  in the square form of the same alphabet. The application of the word *mahārāja* in the genitive, with no trace of a name, might almost incline us to suppose that the title itself was here used as a name, and that it designated the 'Maharaja, king of Awadh,' of the Persian historians, who stands at the head of the third lunar dynasty of Indraprastha, in the 'Rājāvalī' !

The only other coin of the group which contains the same title, is the silver decayed Behat coin, seen more perfect in Ventura's specimen (fig. 16 of pl. [xix.] xxxiv., vol. iv.), where may be read indistinctly  $\mathfrak{m}\mathfrak{h}\mathfrak{r}\mathfrak{a}\mathfrak{j}\mathfrak{a}\mathfrak{m}\mathfrak{h}\mathfrak{r}\mathfrak{a}\mathfrak{j}\mathfrak{a}\mathfrak{m}\mathfrak{h}\mathfrak{r}\mathfrak{a}\mathfrak{j}\mathfrak{a}$  . . .  $\mathfrak{m}\mathfrak{h}\mathfrak{r}\mathfrak{a}\mathfrak{j}\mathfrak{a}$  *Amapasātasa mahārāja . . . mahārāja*. [See vol. i., p. 204].

On the bronze Behat coin (figs. 11, 12, of pl. [iv.]

xviii., vol. iii., and 3, 6, 9, of pl. [xix.] xxxiv., vol. iv.), though we have ten examples to compare, the context is not much improved by the acquisition of our new key: the letters are  $\text{𑀕𑀸𑀓𑀲} + \text{𑀲𑀸𑀓𑀲}$  *basa dhana kanaya dhaya*; (the second letter is more like  $\text{𑀲}$  *bhu*.)

Stacy's supposed Greek legends (figs. 2, 3, of pl. [vii.] xxv., vol. iii.), may be read (as I anticipated), [vol. i., p. 114], invertedly  $\text{𑀲𑀸𑀓𑀲} \text{𑀕𑀸𑀓𑀲}$  *Yagā bijana puta (sa?)*

The larger copper coin, having a standing figure holding a trident (fig. 4, pl. [vii.] xxv., vol. iii.) has, very distinctly, the name of  $\text{𑀕𑀸𑀓𑀲}$  . . . . *Bhagavata cha* (or *sa*). A *rāja* of the name of Bhagavata appears in the Magadha list, about the year 80 B.C.

On some of the circular copper coins, we have fragments of a legend  $\text{𑀕𑀸𑀓𑀲} \text{𑀕𑀸𑀓𑀲}$  *Bhāmada* . . . . *vatapasa*, quasi *Bhimadeva kṛpasya*—but the last word is the only one that can be confided in.

On a similar coin, of which Stacy has a dozen specimens (fig. 47, pl. [xx.] xxxv., vol. iv.) the name of  $\text{𑀕𑀸𑀓𑀲}$  *Rāmadatasa*, 'of Rāmadatta,' is bounded by the 'lizard' emblem of Behat.

These are the only two in the precise form of the *Lāt* character—the others are more or less modified.

Another distinct group (that made known first by Mr. Spiers) from Allahábád (pl. [viii.] xxvi., figs. 12-15, vol. iii., p. 436, See Art. vi.), can be partially deciphered by the *Lāt* alphabet. Capt. Cunningham has a fine specimen with the letters  $\text{𑀕𑀸𑀓𑀲} \text{𑀕𑀸𑀓𑀲}$  *Rāja Dhana-devasya*, 'of Rāja Dhana-deva,' a name not discoverable in the catalogue, though purely Sanskrit. On three more of the same family, we find  $\text{𑀕𑀸𑀓𑀲}$  *Navasa*. On one it seems

rather 𑀮𑀺𑀭 *Narasa*, both Nava and Nara being known names. On another 𑀮𑀺𑀭𑀸 *Kunamasa*; and on another, probably, 𑀮𑀺𑀭𑀸𑀓 *mahāpati*, 'the great lord.'

The 'bull' coins of this last group are connected in type, and style of legend, with the 'cock and bull' series; on which we have lately read *Satya-mitasa*, *Saya-mitasa*, and *Bijaya-mitasa*; so that we have now a tolerably numerous descending series of coins to be classed together from the circumstance of their symbols, of their genitive termination, and their Pāli dialect and character, as a Buddhist series, when we come again to review what has been done within the last few years in the numismatology of India.

But the most interesting and striking application of the alphabets to coins is certainly that which has been already made (in anticipation, as it were, of my discovery, by Lassen, to the very curious Bactrian coins of Agathocles.

The first announcement of Lassen's reading of this legend was given [vol. i. p. 401]. He had adopted it on the analogies of the Tibetan and Pāli alphabets, both of which are connected with, or immediately derived from, the more ancient character of the Lāṭs. The word read by him, 'rājā,' on some specimens seems to be spelt 𑀲𑀺𑀓𑀸, rather than 𑀲𑀺𑀓𑀸𑀓 *lājā*, a corruption equally probable, and accordant with the Pāli dialect, in which the *r* is frequently changed into *y*, or omitted altogether. I am, however, inclined to adopt another reading, by supposing the Greek genitive case to have been rendered as literally as possible into the Pāli character; thus 𑀮𑀺𑀭𑀸𑀓𑀸𑀓𑀸 *Agathuklasyej* for *Agathoklasos*: this has the ad-



vantage of leaving the letters on the other side of the device for the title, *rājā*, of which, indeed, the letter *ṛ* is legible.

I am the rather favorable to this view, because, on the corresponding coin of Pantaleon, we likewise find both the second vowel of the Greek represented by the Sanskrit semivowel, and the genitive case imitated: supplying the only letter wanting on Swinney's coin—the initial *p*,—of which there are traces in Masson's drawing, the word *पन्तलेवन्ति*, *Pantalevanti*, is, by the help of our alphabet, clearly made out; the anuswāra, which should follow the *ṣ*, being placed in the belly of the letter instead of outside; and the *ṛ* being attached to the centre instead of the top of the *ṛ* [*Pantalevāsa*.]

The discovery of these two coins with Pāli characters, is of inestimable importance in confirming the antiquity of the alphabet; as, from the style of Agathocles' coins, he must necessarily be placed among the earliest of the Bactrians, that is, at the very period embraced by the reign of Asoka, the Buddhist monarch of Magadha.

On the other hand, the legend throws light on the locality of Agathocles' rule, which, instead of being, as assigned by M. Raoul Rochette, in '*Haute Asie*,' must be brought down to the confines, at least, of India proper.

As, however, the opinions of this eminent classical antiquary are entitled to the highest consideration, I take this opportunity of making known to my readers the substance of his learned elucidation of this obscure portion of history, given in a note on two silver coins of Agathocles, belonging to the cabinet of a rich amateur

at Petersburg, published in the 'Journal des Savans,' 1834, p. 335 :

'In the imperfect accounts transmitted to us of the troubles occasioned to the Seleucidan kingdom from the invasion of Ptolemy Philadelphus, and of the loss of entire provinces after the reverses of Antiochus II. Theos; the foundation of the Arsacidan kingdom by the defection of the brothers Arsaces and Tiridates is an established point, fixed to the year 256 B.C. But the details of this event, borrowed from Arrian's 'Parthica,' have not yet been determined with sufficient care, as to one important fact in the Bactrian history. From the extracts of various works preserved in Photius, the defection of the Parthians arose from an insult offered to the person of one of these brothers by the Macedonian chief placed by Antiochus II. in charge of the regions of High Asia, and named Phérécidès. The two princes, indignant at such an outrage, are supposed to have revenged themselves with the blood of the satrap, and, supported by the people, to have succeeded in shaking off the Macedonian yoke.

'This short notice from Photius has been corrupted by transcribers in the name of the chief Phérécidès, which modern critics have failed to correct by a passage in the 'Chronographia' of Synocellus, who had equally under his eyes the original of Arrian, and who declares expressly that 'Arsaces and Tiridates (brothers, issue of the ancient king of Persia, Artaxerxes), exercised the authority of satraps in Bactria at the time when Agathocles, the Macedonian, was governor of Persia; the which Agathocles, having attempted to commit on the person of the young Tiridates the assault before alluded to, fell a victim to the vengeance of the brothers, whence resulted the defection of the country of the Parthians, and the birth of the Arsacidan kingdom.' Agathocles is called by Synocellus, *Ἐπαρχος τῆς Περσικῆς*, while Photius calls him (under an erroneous name) *Σατράπης αὐτῆς τῆς γῆρας καταστάντα*, appointed by Antiochus Theos; so that no doubt whatever could exist as to their identity, although, until the discovery of the coins, there was no third evidence whence the learned could decide between the two names. The presumption might have been in favor of Agathocles, because among the body-guard of Alexander was found an Antylucus, son of Agathocles, who, by the prevailing custom of his country, would have named his son Agathocles, after his own father.'

M. Raoul Rochette proceeds to identify the Eparch of Persia with Diodotus, or Theodotus, the founder of the

Bactrian independency ;—supposing him to have seized the opportunity of striking the blow during the confusion of Antiochus' war with Ptolemy, and while he was on deputation to the distant provinces of the Oxus,—that he was at first chary of placing his own head on his coin, contenting himself with a portrait of Bacchus, and his panther on the reverse, but afterwards emboldened to adopt the full insignia of royalty. Thus, according to our author, a singular shift of authorities took place : Arsaces, the satrap of Parthia, quits that place and sets up for himself in Persia, in consequence of the aggression of Diodotus (or Agathocles), king of Bactria, who had originally been Eparch of Persia,—both satraps becoming kings by this curious *bouleversement*. The non-discovery of Theodotus' medals is certainly in favor of M. Raoul Rochette's argument, but the present fact of a Hindî legend on his coin militates strongly against his kingdom being thrown exclusively to the northward. By allowing it to include Parthia proper, or Seistan, and the provinces of the Indus, this difficulty would be got rid of; but still there will remain the anomaly of these Indian legends being found only on Agathocles, and Pantaleon's coins, while those of Menander, who is known to have possessed more of India proper, have only the Pehlvi reverse. Agathocles' rule must have included a sect of Buddhists somewhere, for, besides the letters, we find their peculiar symbol present on many of the 'panther' coins. At any rate, we have certainty of the existence of our alphabet in the third century before Christ, exactly as it exists on our Indian monuments, which is all that on the present occasion it is relevant to insist upon. . . .

[Prinsep then goes on to test the application of this alphabet to other classes of inscriptions, and terminates his remarks with—]

A few words in conclusion regarding the alphabet, of which I have had a fount prepared while this article was setting up for press.

There is a primitive simplicity in the form of every letter, which stamps it at once as the original type whereon the more complicated structure of the Sanskrit has been founded. If carefully analyzed, each member of the alphabet will be found to contain the element of the corresponding member, not only of the Devanāgarī, but of the Kanañj, the Pālī, the Tibetan, the Hala Kanara, and of all the derivatives from the Sanskrit stock.

But this is not all: simplification may be carried much farther by due attention to the structure of the alphabet, as it existed even at this early stage, and the genius of its construction, *ab initio*, may in some measure be recognised and appreciated.

First, the aspirated letters appear to have been formed in most cases by doubling the simple characters; thus, *ḥ chh* is the double of *ḥ ch*; *ṭh* is the double of *ṭ ṭ*; *ḍh* is the half of this; and *ṇh* is the same character with a dot as a distinguishing mark: (this may account for the constant interchange of the *ṭ*, *ḥ*, *ṇ*, and *ṇ*, in the inscriptions). Again: *ḥ dh* is only the letter *ṭ* produced from below—if doubled, it would have been confounded with another letter, the *ḥ*. The aspirated *p ṭ* is merely the *ṭ p* with a slight mark, sometimes put on the outside, either right or left,<sup>1</sup> but I cannot yet affirm

<sup>1</sup> [I have allowed Prinsep's original speculations on the structure of this alphabet to stand uncommented upon; and have reserved for rectification, under his own hand, in the succeeding article, whatever was left imperfect or incomplete in this.]

that this mark may not merely denote a duplication of the letter rather than an aspiration—if, indeed, the terms were not originally equivalent; for we have just seen the doubling of the letter made to denote its aspiration.

The *kh* seems formed from the *g* rather than the *k*: the *gh* and *jh* are missing as in Tibetan, and appear to be supplied by *g* and *chh* respectively: *bh* is anomalous, or it has been formed from the *d* by adding a downward stroke.

Again, there is a remarkable analogy of form in the semi-vowels *r*, *ṛ*, *l*, *y*, *ṛ*, *ṣ*, *ṣ*, *ṣ*, which tends to prove their having been framed on a consistent principle: the first *r* hardly ever occurs in the Dīhlī inscription, but it is common in that from Gīrnār. The *h* *ṛ* is but the *ṣ* reversed: the *ṛi*, so peculiar to the Sanskrit alphabet, is formed by adding the vowel *i* to the *r*, thus, *r*.

As far as is yet known, there is only one *n*,<sup>1</sup> and one *s*: the nasals and sibilants had not therefore been yet separated into classes; for the written Pāli of 200 years later possesses at least the various *n*'s, though it has but one *s*.

The four vowels, initials, have been discovered, *a*, *ṛ*, *ṛ*, *ṛ*; *a*, *i*, *e*, *u*. The second seems to be the skeleton of the third, as if denoting the smallest possible vocal sound. Of the medial vowels it is needless to speak, as their agreement in system with the old Nāgarī was long since pointed out. The two long vowels *ī* and *ū*, are produced by doubling the short symbols. The *visarga* is of doubtful occurrence, but the *anusvāra* is constantly employed;

<sup>1</sup> I think the Gīrnār and Ceylon inscriptions will be found to have the other nasals made by the modification of the primary *ṛ*. There are other letters in these texts not found in the Lātr of this side of India.





the  $\alpha$   $\beta$  being merely the  $\alpha$   $\mu$  closed at the top; and in square Pāli  $\omega$  and  $\sigma$ .

Thus, when we come to examine the matter critically, we are insensibly led to the reduction of the written characters to a comparatively small number of elements, as  $\alpha$ ,  $\delta$ ,  $\zeta$ ,  $\epsilon$ ,  $\perp$ ,  $\beta$ ,  $\theta$ ,  $\gamma$ ,  $\delta$  and  $\omega$ ; besides the vowels  $\mu$ ,  $\nu$ ,  $\iota$ . Or, perhaps, in lieu of this arrangement, it may be preferable to adopt one element as representative of each of the seven classes of letters. We shall thus come to the very position long ago advanced by Iambulus the traveller.

Iambulus was antecedent, says Dr. Vincent, to Diodorus; and Diodorus was contemporary with Augustus. He made, or pretended to have made, a voyage to Ceylon, and to have lived there seven years. Nine facts mentioned by him as characteristic of the people of that country, though doubted much in former days, have been confirmed by later experience: a tenth fact the learned author of the 'Periplus' was obliged to leave to future inquiry,—namely, "whether the particulars of the alphabet of Ceylon may not have some allusion to truth: for, he says, 'the characters are originally only seven, but by four varying forms or combinations they become twenty-eight.'<sup>1</sup>

It would be difficult to describe the conditions of the Indian alphabetical system more accurately than Iambulus has done in his short summary, which proves to be not only true in the general sense of the classification of the letters, but exact as to the origin and formation of the symbols. As regards the discussion of the edict of

<sup>1</sup> Vincent's 'Periplus of the Erythraean Sea.'

Devánampiyatissa, the testimony of Iambulus is invaluable, because it proves that written characters—our written characters—were then in use (notwithstanding the Buddhist books were not made up till two centuries later :) and it establishes the credit of a much vituperated individual, who has been so lightly spoken of, that Wilford endeavours to identify him with Sindbad the Sailor, and other equally marvellous travellers !

[ Though not strictly susceptible of classification with numismatic developments, I am anxious to associate with James Prinsep's other contributions to the historical antiquities of India, his most interesting discovery of the names of the early successors of Alexander the Great, on the lapidary monuments of Asoka, the grandson of Chandragupta.]

#### DISCOVERY OF THE NAME OF ANTIOCHUS THE GREAT, IN TWO OF THE EDICTS OF ASOKA, KING OF INDIA.

(Read at the Meeting of the Asiatic Society of Bengal, on the 7th March, 1836.)

As long as the study of Indian antiquities confines itself to the illustration of Indian history, it must be confessed that it possesses little attraction for the general student, who is apt to regard the labor expended on the disentanglement of perplexing and contradictory mazes of fiction, as leading only to the substitution of vague and dry probabilities for poetical, albeit extravagant, fable. But the moment any name or event turns up in the course of such speculations, offering a plausible point of connection between the legends of India and the rational histories of Greece or Rome,—a collision between the fortunes of an eastern and a western hero,—forthwith a speedy and spreading interest is excited, which cannot be satisfied until the subject is thoroughly sifted by the examination of all the ancient works, western and eastern, that can throw concurrent light on the matter at issue. Such was the engrossing interest which attended the identification of Sandracottus with Chandragupta, in the days of Sir Wm. Jones: such the ardour with which the Sanskrit was studied, and is still studied, by philologists at home, after it was discovered to bear an intimate relation to the classical languages of ancient Europe. Such, more recently, has

been the curiosity excited, on Turnour's throwing open the hitherto sealed page: of the Buddhist historians to the development of Indian monuments and Paurānic records.

The discovery I was myself so fortunate as to make, last year, of the alphabet of the Dīhlī Pillar Inscription, led immediately to results of hardly less consideration to the learned world. Dr. Mill regarded these inscriptions as all but certainly demonstrated relics of the classical periods of Indian literature. This slight remainder of doubt has been since removed by the identification of Piyadasi as Asoka, which we also owe to Turnour's successful researches; and, dating from an epoch thus happily achieved, we have since succeeded in tracing the name of the grandson of the same king, Dasaratha, at Gaya, in the same old character; and the names of Nanda and Allas, and perhaps Vijaya, in the Kalinga caves: while on Bactrian coins we have been rewarded with finding the purely Greek names of Agathodes and Pantaleon, faithfully rendered in the same ancient alphabet of the Hindūs.

I have now to bring to the notice of the Society another link of the same chain of discovery, which will, if I do not deceive myself, create a yet stronger degree of general interest in the labours, and of confidence in the deductions, of our antiquarian members than any that has preceded it. I feel it so impossible to keep this highly singular discovery to myself that I risk the imputation (which has been not unjustly cast upon me in the course of my late undigested disclosures), of bringing it forward in a very immature shape, and, perhaps, of hereafter being obliged to retract a portion of what I advance. Yet neither in this, nor in any former communication to the Society, have I to fear any material alteration in their general bearing, though improvements in reading and translation must of course be expected as I become more familiar with characters and dialects unknown for ages past even to the natives themselves, and entirely new to my own study.

A year ago, as the Society will remember, Mr. Wathen kindly sent me a reduced copy of the facsimiles of the inscriptions on a rock at Girnār (Giri-nagara) near Junāgarh, in Gujarāt, which had been taken on cloth by the Rev. Dr. Wilson, President of the Bombay Literary Society. He also sent a copy to M. Jacquet of Paris, which I dare say before this has been turned to good account.

After completing the reading of the Pillar Inscriptions, my attention was naturally turned to these in the same character from the west of India, but I soon found that the copy sent was not sufficiently well done to be thoroughly made out; and I accordingly requested Mr. Wilson to favour me with the facsimile itself, which, with the most liberal frankness, he immediately sent round under a careful hand by

sea. Meanwhile Lieut. Kittoe had, as you are also aware, made the important discovery of a long series of inscriptions in the same character at a place called Dhault, in Katak. These were in so mutilated a state that I almost despaired of being able to sift their contents; and they were put aside, at any rate until a more promising portion of my labour should be accomplished.

I had just groped my way through the Girnâr text, which proved to be, like that of the pillars, a series of edicts promulgated by Asoka, but essentially different both in language and in purport. When I took up the Katak inscriptions, of which Lieut. Kittoe had been engaged in making a lithographic copy for my journal, to my surprise and joy I discovered that the greater part of these inscriptions (all, indeed, save the first and last paragraphs, which were enclosed in distinguishing frames), was identical with the inscription at Girnâr. And thus, as I had had five copies of the Pillar Inscription to collate together for a correct text, a most extraordinary chance had now thrown before me two copies of the rock edicts to aid me in a similar task! There was, however, one great variance in the parallel; for, while the pillars were almost identical letter for letter, the Girnâr and Katak texts turned out to be only so in substance, the language and alphabet having both very notable and characteristic differences.

Having promised thus much in explanation of the manner of my discovery, I must now quit the general subject for a time, to single out the particular passage in the inscriptions which is to form the theme of my present communication.

The second tablet at Girnâr is in very good preservation; every letter is legible, and but two or three are in any way dubious. The paragraph at Aewastuma, which I found to correspond therewith, is far from being in so good a state; nevertheless, when the extant letters are interlined with the more perfect Girnâr text, they will be seen to confirm the most important passage, while they throw a corroborative evidence upon the remainder, and give a great deal of instruction on the respective idioms in which the two are couched.

The edict relates to the establishment of a system of medical administration throughout the dominions of the supreme sovereign of India, at one of which we may smile in the present day, for it includes both man and beast; but this we know to be in accordance with the fastidious humanity of the Buddhist creed, and we must therefore make due allowance for a state of society and of opinions altogether different from our own.

#### TRANSLATION.

"Everywhere within the conquered provinces of Raja Piyadasi, the beloved of the gods, as well as in the parts occupied by the faithful, such as Chola, Pîḍa, Satiyaṇputra,

and Ketalaputra, even as far as Tambapanni (Ceylon)—and moreover, within the dominions of Antiochus the Greek (of which Antiochus' generals are the rulers)—everywhere the heaven-beloved Rāja Piyadasi's double system of medical aid is established, both medical aid for men, and medical aid for animals: together with medicaments of all sorts, which are suitable for men, and suitable for animals. And wherever there is not (such provision), in all such places they are to be prepared, and to be planted: both root-drugs and herbs, whosoever there is not (a provision of them) in all such places shall they be deposited and planted.

“And in the public highways walls are to be dug, and trees to be planted, for the accommodation of men and animals.”

Many things are deserving of comment in this short edict. . . . But the principal fact which arrests attention in this very curious proclamation, is its allusion to Antiochus the Yona (Sanskrit, *Yavana*) or ‘Greek’ king. The name occurs four times over, with only one variation in the spelling, where, in lieu of *Antiyako* we have *Antiyaka*, a still nearer approach to the Greek. The final *a* is the regular Pāli conversion of the Sanskrit nominative masculine termination *as*, or the Greek *as*. In the Pillar dialect the visarga of the Sanskrit is replaced by the vowel *a*, as we see in the interlined reading, *Antiyaka*. Again, the interposition of the semivowel *y* between the two Greek vowels *i* and *a* is exactly what I had occasion to observe in the writing of the words *Agathuklayoj* and *Pautalaucanta* for *Αγαθοκλαῖος* and *Παυταλευαντος* on the coins. All this evidence would of itself bias my choice towards the reading adopted, even were it possible to propose any other; but although I have placed the sentence, exactly transcribed in the Devanāgarī character, in the pandit's hand, he could not, without the alteration of very many letters, convert it to any other meaning, however strained. And were there still any doubt at all in my mind, it would be removed by the testimony of the Katak version, which introduces between *Antiyako* and *Yona* the word *adma*,—making the precise sense ‘the Yona rāja, by name Antiochus.’

[ I transcribe so much of the duplicate version of the original, since illustrated and confirmed by the decipherment of the Arian inscription at Kapur di Giri, as in any way affects the historical value of the document, together with Professor Wilson's commentary and revision of Prinsep's translation. The Professor's opening remarks explain the derivation and arrangement of the parallel texts, inserted *in extenso* in the Journal of the Royal Asiatic Society.]

In order to exhibit with as much distinctness as possible the



language of the inscriptions. . . . I have placed the several inscriptions in parallel lines, in order to bring the words of each in juxta-position as far as was practicable. They accordingly form four lines. The upper line represents Mr. Prinsep's original readings, as published in the *Journal of the Asiatic Society of Bengal*, vol. vi., p. 228, and above the line, in a smaller character, are inserted his subsequent corrections, as given in a copy of the *Journal*, corrected by himself, and placed at Mr. Norris's disposal, by his brother, Mr. H. T. Prinsep. Small numerals refer to the lines of our own lithographed copy. This line I have designated G a. The second line is the representation of the copy lithographed (in the '*Jour. Roy. As. Soc.*,' vol. xii., p. 153), and which I have generally referred to as Mr. Westergaard's copy, as he has the larger share in it. This is marked G b. The third line marked D repeats the Dhauti inscription, as given by Mr. Prinsep. We have not yet been fortunate enough to have had a second and revised transcript, although it is very desirable. The lower line is marked K, as being rendered into Roman letters from the lithographed copy of the Kapur di Giri inscription. The small figures here also refer to the lines of the original. Where blanks occur in either of the inscriptions they are denoted by asterisks (dots are used in this work): where words are wanting for the collation, although there is no blank in the inscription, a line (of dots) supplies their place.

TABLE II.

G a	<sup>1</sup> Sarata	<sup>2</sup> vijitambhī	<sup>3</sup> devānam	<sup>4</sup> piyasa	<sup>5</sup> Piyadasino	<sup>6</sup> rajo
G b	Sarata	vijitambhī	devānam	piyasa	Piyadasino	rajo
D	arata	vijitambhī	devānam	piyasa	Piyadasino	.
K	Saratan	vijite	devānam	piyasa	Priyadasino	raja
G a	<sup>1</sup> evamapipāvantasa	<sup>2</sup> yathā	<sup>3</sup> Chodā	<sup>4</sup> Pidā	<sup>5</sup> Satiyaputā	
G b	evamapipāvantasa	yathā	Chodā	Pidā	Satiyaputā	
D	.	.	.	.	.	.
K	.	.	yi	<sup>1</sup> Palaya	<sup>2</sup> Satiya	<sup>3</sup> putra
G a	<sup>1</sup> Ketalaputa, a	<sup>2</sup> Tambapanni	<sup>3</sup> Antiyako	<sup>4</sup> yasa	<sup>5</sup> raja	<sup>6</sup> ye
G b	Ketalaputā, a	Tambapani	Antiyaka	yasa	raja	ye
D	.	.	tiyaka nāma	yasa	laja	yā
K	cha Ketalamputra	Tambapani	Antiyaka	ne	yasa	raja ye
G a	<sup>1</sup> vā pi	<sup>2</sup> — tsa	<sup>3</sup> Antiyakasa	<sup>4</sup> samino	<sup>5</sup> rahjano	
G b	vā pi	— tsa	Antiyakasa	samipum	rahjano	
D	va . .	— . . sa	Antiyakasa	samanta	lajano	
K	cha	asana tsa	Antiyakasa	samata	rajaya	

The portion of the Kapur di Giri inscription, which corresponds with the second Tablet of Girnar and Dhauti, is less imperfect than that which answers to the first

Tablet, and in the few blanks which occur, it admits of being conjecturally completed without any great violence.

There are, however, several omissions as compared with the Girnar sculpture, which are apparently intentional, constituting a variety in the language, though not in the general purport of the inscriptions. The inscriptions correspond also in the chief point of interest, the mention of Antiochus, the Yava Raja.

The inscription commences with the phrase, *Savata ejahe*, followed by a short blank, which may be filled up, without much risk of error, by the syllable *ashe*, of the Girnar Tablet—'everywhere in the conquered countries,'—which is followed by the usual designation 'of the beloved of the gods' *Piyadasi*, the genitive being as before, *Piyadasihe*: the word 'countries,' it may be presumed, is understood in all the inscriptions.

We have no equivalent for what follows, which is read by Mr. Prinsep, *evame-pidamantam*. In Westergaard's copy it might be read, *ashe pashantam*, but it is, perhaps, only *evame epi pashantam* (*epi pashantam*) 'also even in the bordering countries,' not as Prinsep proposes, 'as well as in the parts occupied by the faithful.' Nor have we any equivalent for *Chola*, conjectured by Prinsep to be that portion of the south of India which is known as Chola, or Cholanantala, whence our Coromandel.

Instead of *Pala*, which requires to be corrected to *Pala*, we have *Palaya*, and then *Satiya-patra* or *Katalaguti* *Tandipani*, or, more correctly, in *Satiya-patra* *Katalaguti* and *Tandipani*, words which have been thought intended to designate places in the south of India, but of which the two first, *Palaya* and *Satiya-patra*, are new and unknown. *Kerala* is no doubt a name of Malabar, as *Chola* is of the opposite coast; but we also find both words in combination with others, designating countries or people in the north-west, as *Kasabga*, *Yavana*, *Chola*, *Murda*, *Kasala*, *Sika*. (*Samas-Patra*, referring to a letter of Ptolemy, 4. l. 175.) *Tandipani* it has been proposed to identify with *Tamrapani*, or Ceylon, but further research may also remove that to the north. The same authority, giving the *trans*, or list of words indicated in the *astara*, 6. l. 116, explains them to signify tribes of fighting men, and specifies among them *Savatri-patra*, which offers some analogy to the *Satiya-patra* of the inscription. It is much more likely that countries in the north-west, than in the extreme south, of India are intended.

We next come to the important passage in which a Greek name and designation occur. Both the Girnar copies read *Antipolis yava raja*: the Kapur di Giri has *Antipolans yava raja*; but the two last letters, *ns*, are rather doubtful. It should perhaps be *Antipolis* name, as at Dhanli, where we have *tipolis nama yava raja*. The use of the nominative case, however, offers a symmetrical perplexity, for there is not any verb through which to connect Antiochus with the rest of the sentence; and it seems unusual to associate the name of an individual with those of places. Prinsep supplies the defect with 'the dominions of Antiochus the Greek;' but we have no term for 'the dominions,' nor is the noun in the genitive case, as it is in what follows. In this the Kapur di Giri inscription nearly agrees with that of Girnar, and it may be read *ya cha a raja tava Antipolans savata rajaya ashe dhamam priyasa*, &c., that of Girnar being *ya va pi tava Antipolans savata rajaya savata*. Either may be rendered 'and those princes who are near to Antiochus everywhere,' although *rajaya* is an unusual form of the plural of *raja*, being neither Sanskrit nor Pali. The object of prefixing a to *raja* in the word *savata*, being equivalent to 'no king,' is not very intelligible, and it can scarcely be doubted that *savata* should be *savata*, as found both at Girnar and Dhanli. It seems likely that there may be some inaccuracy in this

part, either in the original or the copy. But admitting a concurrent reading, we still want a connecting word, and it is not specified what these neighbours or dependants of Antiochus are to do. We may presume that they are expected to attend to the object of the edict, or they may be comprehended in the list of the *sevatis vijita*, 'the conquered.'

PROPOSED TRANSLATION.

In all the subjugated (territories) of the King Priyadasi, the beloved of the gods, and also in the bordering countries, as (Chola), Pulaya, (or Paraya), Satya-putra, Kotalaputra, Tamlapana (it is proclaimed), and Antiochus by name, the Yona (or Yavana) Raja, and those princes who are near to (or allied with) that monarch, universally (are apprised) that (two designs have been cherished by Priyadasi: one design) regarding men, and one relating to animals; and whatever herbs are useful to men or useful to animals.

PRINCEY'S TRANSLATION.

\*Everywhere within the conquered provinces of raja Priyadasi, the beloved of the gods, as well as in the parts occupied by the faithful, such as Chola, Pida, Satiyaputra, and Kotalaputra, even as far as Tamlapana (Ceylon); and moreover, within the dominions of Antiochus, the Greek (of which Antiochus' generals are the rulers)—everywhere the heaven-beloved raja Priyadasi's double system of medical aid is established; both medical aid for men, and medical aid for animals; together with the medicines of all sorts, which are suitable for men, and suitable for animals.'

CONTINUATION OF REMARKS ON THE EDICTS OF PIYADASI, OR ASOKA, THE BUDDHIST MONARCH OF INDIA, PRESERVED ON THE GIRNAR ROCK IN THE GUJARAT PENINSULA, AND ON THE DHAULI ROCK IN KATAK; WITH THE DISCOVERY OF PTOLEMY'S NAME THEREIN.

(Read at the meeting of the Asiatic Society of Bengal, on the 4th April, 1828).

In continuation of the discovery I had the pleasure of bringing to the notice of the Society at its last meeting, I am now enabled to announce that the edicts in the ancient character from Gujarrat do not confine their mention of Greek sovereigns to Antiochus the ally of Asoka, but that they contain an allusion, equally authentic and distinct, to one of the Ptolemies of Egypt! The edict containing this highly curious passage is in a mutilated condition and at the very end of the inscription, which will account for its having hitherto escaped my attention. As I propose to lay before the Society a brief account of the whole of the Girnar inscription, I will do no more than mention the fact at present, reserving the particulars until I come to the actual position of the passage on the stone.

I have already mentioned the fortunate discovery of a duplicate of the Gujarrat inscription, at Dhauri, in Katak.

The divided sentences, or, as I shall for the present venture to call them, the edicts, which are common to Girnar and to Dhauri, are eleven

in number. From the first to the tenth they keep pace together: the only difference being that while, at Girnâr, each is surrounded by an engraved line as a frame; at Dhauî, the beginning of each edict is marked by a short dash. The regular succession is then interrupted by three interpolations at Girnâr; after which, the fourteenth edict of that series is found to correspond with the eleventh or concluding one of the same set at Dhauî.

The three missing edicts are more than compensated at Dhauî by the introduction of two others not found at Girnâr, one at the end enclosed in a frame, and one on the left hand of the same rock on a larger scale of sculpture; but both of these being of a totally different purport, and being quite unconnected with the rest, I shall postpone for separate consideration.

That the edicts are of different dates is proved by the actual mention of the year of Piyadasi's reign, in which several of them were published. Two of them are dated in the tenth<sup>1</sup> and two in the twelfth year after his *abhišek* or consecration, which we learn from Turnour's Pâli history did not take place until the fourth year of his accession to the throne of his father, Bindusaro. Only one of the pillar edicts is dated in the twelfth year; the remainder, generally, bearing the date of the twenty-seventh year; and one containing both, as if contradicting, at the later epoch, what had been published fifteen years before. From this evidence we must conclude that the Gujarât and Katak inscriptions have slightly the advantage in antiquity over the Lâti of Dîhli and Allahâbid: but, again, in the order of sequence, we find edicts of the twelfth year preceding those of the tenth; and we learn expressly from the fourteenth edict that the whole were engraven at one time. Their preservation on rocks and pillars therefore must be regarded as resulting from an after order, when some re-arrangement was probably made according to the relative importance of the subjects.

The copy that emanated from the palace must, however, have been modified according to the vernacular idiom of the opposite parts of India to which it was transmitted, for there is a marked and peculiar difference, both in the grammar and in the alphabet of the two texts, which demands a more lengthened examination than I can afford to introduce in this place. I shall, however, presently recur to this subject, and, at least, give the explanation of those new characters which I have been obliged to cut in order to print the Girnâr text, and which, in fact, render the alphabet as complete as that of the modern Pâli,

<sup>1</sup> I use these terms as more consonant to our idiom: the correct translation is 'having been consecrated ten and twelve years,' so that the actual period is one year later in our mode of reckoning.







K	tikona	nama	Mako	nama	Alkasmari	nama	Ikchicha
G a	<sup>igona</sup> takana	cha	Magt	cha			
G s	takana	cha	Magt	cha			

The division of the Girnar inscriptions, numbered by Prinsep as thirteen, finds a counterpart at Kapur di Gori; but, unfortunately, it is not of a nature to supply the defects and imperfections of the Girnar tablet. As mentioned by Prinsep, the rock at Girnar is at this part so much mutilated, that it is difficult to put together the context of the entire tablet: portions of the inscription are wanting at either end of each line, especially at the beginning, but the middle portions are tolerably perfect. The rock at Kapur di Gori has not apparently suffered much mutilation, and the inscription is consequently more complete, supplying the words effaced from that at Girnar; but it is not only in this respect that it exceeds in length the Girnar inscription. There are evidently additional passages which the latter does not contain, and which intervene between what are apparently intended for the same passages in both places; on the other hand, there are several obliterations or deficiencies in the Kapur di Gori inscription where that at Girnar is entire. In collating the two, therefore, wide gaps occur without a parallel, partly owing to these respective mutilations,—partly to the additional matter at Kapur di Gori. From place to place, however, concurrent passages do occur, which leave no doubt of the general identity of the inscriptions, as will appear from the collated copy.

It happens, however, still unfortunately, that neither the additional, nor those which are evidently identical passages in the Kapur di Gori inscription, are for the major part to be satisfactorily deciphered. The circumstances under which the characters were transcribed sufficiently account for the disappointment. Masson has explained the impossibility of taking a fac-simile of this part of the inscription, and he was obliged after many fruitless efforts to effect his purpose, to be content with carrying off a copy only. But the position of the stone, which prevented a fac-simile from being made, was also obviously unfavourable to the making of a faithful copy; and it is not at all therefore to be wondered at, that the forms of the letters should have assumed deceptive appearances, differing consequently in different parts of the inscription, in words which there is reason to believe the same; and varying from one another in words which from one or two distinct characters are known to be identical, as for instance in *devassana pya*, in which the latter term is generally legible, and we may therefore infer that *devassana* precedes it; but, without such a guide, it would be impossible to read *devassana*, as it presents itself in a number of different and unusual forms. Masson's copy, however, is more legible than one made by a native employed by M. Court, the use of which has been kindly allowed to the Society by Lassen. In this, very few words can be made out, even by conjecture, and with the assistance of Masson's transcript. It has not, however, been wholly unserviceable.

Prinsep has ventured to propose a conjectural translation of the Thirteenth Tablet, although he admits that isolated phrases alone are intelligible. Such is the case in the Kapur di Gori inscription; and it were very unsafe to propose anything like a connected rendering, even of what is perfect, although a few words and phrases are decipherable, and may be compared with similar words and phrases in the Girnar tablet. In most of these passages, however, the reading of the original itself is conjectural only, for it will follow from the sources of imperfection described, that although a transcript has been attempted as above in Roman characters, yet no great reliance is to be placed on the greater part of it, particularly where parallel passages are not found in the Girnar inscription.

Deficiencies at the end of the seventh and beginning of the eighth line at Girnâr, are rather more than adequately filled up at Kâpur di Gîrî, and some of the additional matter is important. The name and designation, *Antiyela nama yona Raja*, are given distinctly: why he is introduced does not very well appear, but we might venture to connect it with what precedes, and to interpret and fill up the passages thus: 'He who had obtained the alliance of men—he has been received as the friend of (me) Devanampriya.' we have for this conjectural rendering, *Devanama priyama*; then some unreadable letters, *samapâ* (for *samapriya*) *ya jama* (or) *samapata*. At Girnâr we have only *yona Raja*, but no name, no Antiochus, nor any circumstance relating to him. Both inscriptions next read *paravanda*, 'and afterwards'; the Girnâr has then *tama*, 'by him,' which, as no name was specified, Prinsep necessarily interpreted, 'by whom' (rather 'by him,' the Greek king). In the Kâpur di Gîrî tablet, *tama* refers of course to Antiochus; but, not to leave any doubt on this score, the inscription repeats the name, and gives us *tama Antiyelama*, 'by that Antiochus'; thus furnishing a very important illustration of the Girnâr tablet. What then was done by him? by that Antiochus? this is not to be made out very distinctly; but, connected with what follows, it may be conjectured to imply that four other Greek princes were brought under subjection by him. There can be no doubt that the numeral which Prinsep read *chaptara* is, properly, *chattara*. There is no *p* in the Kâpur di Gîrî inscription; it is, clearly, *chattara*, with the usual disregard of correct orthography and identification of long and short vowels. In the Girnâr inscription the form is like *pe*, no doubt; but this combination, as already observed, treating of Tablet XII., is so utterly repugnant to the most characteristic features of Pâli, that it cannot be allowed; and in this case, if the original word intended to be the Sanskrit numeral *chattvâra*, the *p* would be gratuitously inserted. The only admissible reading is *chattara*, the regular Pâli form of the Sanskrit *chattvâra*: four indistinct marks follow the numeral in each inscription, being probably intended for figures equivalent to four. We then have the several names of the four princes remarkably distinct, and it luckily happens that M. Court's copy is also very legible in this passage, and entirely confirms Mason's readings. The passage runs thus: *Turamara nama, Antilema nama, Maki nama, Alikumari nama*. At Girnâr the last name is wanting, there being some letters obliterated. We have also some variation in the reading, but not material, the names being there, *Turamara cha, Antilema cha, Maga cha*. The two inscriptions give us, no doubt, the names of four Greek princes, of whom Ptolemy, Antigonos, and Magas may be readily recognised, although, how they came into juxtaposition with Antiochus on the one hand, or Alexander on the other, is only to be explained by the supposition that, although these names had from their celebrity reached the west of India, the history of the persons so named was vaguely and incorrectly known.

We shall, however, recur to the subject: at present we are only concerned with the purport of the inscription, which is unfortunately by no means distinct. We have the order, by that Antiochus four Yavana kings, were:—what? neither inscription enables us to answer: the Girnâr inscription being in fact here mutilated. Prinsep, in his introductory remarks, supplying the connection conjecturally, fills up the blank by reading, 'And the Greek king besides, by whom the four kings have been induced to permit,' but there is nothing to warrant such a translation; and in the actual rendering of the passage the latter clause is omitted: we there have, 'and the Greek king, besides, by whom the kings of Egypt, Ptolemaios, Antigonos (?), and Magas, etc.', and then follows a blank. The Kâpur di Gîrî inscription, although entire, presents characters of undetermined value, and probable inaccuracies. The

first term, *lilāhika thava*, is very doubtful; the next appears to be *jayavata*, which might be rendered 'victorious,' in the instrumental case, agreeing with *Antiyokea*: *amasa* is doubtful, both as to reading and sense; we see *mīti pava rajanti* might be rendered 'they who [the kings] become his friends, again shine (or enjoy dominion).' We may also render *eva hi gata hanti yasha*, 'such, indeed, is the Yavana because, of whom;' there then follow some indistinct characters, and the phrase seems to terminate with *mīti hi kīta*, 'friendship or alliance has been made.' This I admit is very conjectural, and a corrected copy or a better founded interpretation of the original may shew it to be wholly erroneous; but, in the present state of the inscriptions we may hazard the conjecture that the purport of the whole passage may be, that the four princes, after being overthrown by Antiochus, had been reconciled to him, and that an alliance had then been formed between him and the Indian prince Devapriya. There is nothing whatever to justify the supposition that Devapriya had attempted to make converts of the Greek princes, or to disseminate the doctrines and practices of Buddhism in their dominions.

The state of this transcript of the Kaper di Giri inscription is very far from satisfactory, while, from the names it conveys, it appears to be of great historical value: It would be very desirable to have a fac-simile carefully taken; and, as the part of the country in which it is situated is now within the reach of British influence, it might be possible, perhaps, without much difficulty, to have such a copy. In the 'Jour. As. Soc. Bèng.', Feb. 1848, Capt. Cunningham mentions, in his Diary, his having visited the spot, and taken a copy of the most legible portion of the inscription;<sup>1</sup> he adds, however, that a proper copy could only be made by leveling the ground and building up platforms, and by white-washing the surface of the rock to bring out the sunken letters, a work of time, but which would well repay the labour.

[Prof. Wilson, it will be seen, promised to recur to the subject of the identities of the kings named in the inscription; he does so—while contesting the identity of Piyadasi and Asoka—to the following effect] :—

So that neither of these epithets (*Tripiṇḍarāma*, or *Śū-darsana*), is exclusively restricted to Asoka, even if they were ever applied to him.

That they were so applied is rendered doubtful by chronological difficulties, of which it is not easy to dispose: Piyadasi appears to have lived, either at the same time with, or subsequent to, Antiochus. Could this have been the case if he was Asoka? For the determination of this question, we must investigate the date at which the two princes flourished, as far as the materials which are available will permit.

The first point to be adjusted is, which Antiochus is referred to. There are several of the name amongst the kings of the Seleucidæ dynasty, whose sway, commencing in Syria, extended at various times, in the early periods of their history, through Persia to the confines of India. Of these, the two first, Antiochus Soter and Antiochus Theos, were too much taken up with occurrences in Greece and in the

<sup>1</sup> [A lithograph, by T. Black, of Calcutta is now before me, which purports to give, under Mr. J. W. Laidlay's authority, the 'Inscription at Shāh-baz-garhi, copied by Captain A. Cunningham.' The facsimile is defective and erroneous to a marked degree. As it does not include the thirteenth tablet, it affords no aid in determining the probable orthography of the doubtful names. Major Cunningham's own version of the 11th name is quoted at the foot of p. 26.]

west of Asia, to maintain any intimate connexion with India, and it is not until the time of Antiochus the Great, the fifth Seleucid monarch, that we have any positive indication of an intercourse between India and Syria. It is recorded of this prince that he invaded India, and formed an alliance with its sovereign, named by the Greek writers, Sophaganesus, in the first member of which it requires the etymological courage of a Wilford to discover *Asoka*. The late Augustus Schlegel conjectured the Greek name to represent the Sanskrit, *Saukhāgaya* *jana*, he whose army is attended by prosperity; but we have no such prince in Hindu tradition, and it could scarcely have been a synonym of *Asoka*, the literal sense of which is, he who has no sorrow. Neither is Sophaganesus more like *Piyadeni*, and so far therefore we derive no assistance as to the identification of Antiochus. Still, with reference to the facts, and to the allusion to his victorious progress, which Tablet XIII. seems to contain, we can scarcely doubt that he was the person intended, and that the Antiochus of the inscription is Antiochus the Great, who ascended the throne, *a.c.* 223, and was killed, *a.c.* 187. The date of his eastern expedition is from *a.c.* 212 to *a.c.* 205.

There is, however, an obvious difficulty in the way of the identification from the names of the princes which are found in connexion with that of Antiochus, and which the thirteenth Tablet appears to recapitulate as those of contemporary princes, —subjugated, if the conjectured interpretation be correct, by Antiochus. With respect to one of them, Ptolemy, this is allowable, for Antiochus the Great engaged in war with Ptolemy Philopator, the fourth king of Egypt, with various success, and concluded peace with him before he undertook his expedition to Bactria and India. He therefore was contemporary with Antiochus the Great. It is, however, to be recollected that Ptolemy Philopator was preceded by three other princes of the same name, Ptolemy Soter, Ptolemy Philadelphus, and Ptolemy Euergetes, —extending through a period of rather more than a century, or from *a.c.* 323 to *a.c.* 221. These princes were frequently engaged in hostilities with the Seleucid kings of Syria, and we cannot therefore positively determine which of them is referred to in the inscription. The long continuance of the same name, however, among the kings of Egypt, as it was retained until the Roman conquest, no doubt made it familiar throughout the East, and we need not be surprised to find it at *Kapur di Giri* or *Girnar*.

The same circumstance will not account for the insertion of the name of Mago, probably Magas, for although there was such a prince, he was far removed from India, and of no particular celebrity. Magas was made ruler of Cyrene by his father-in-law, Ptolemy Soter, the first Greek king of Egypt, about *a.c.* 308. He had a long reign of fifty years, to *a.c.* 258. He was not, therefore, contemporary with Antiochus the Great, dying thirty-five years before that prince's accession. He was connected with Antiochus Soter, having married his daughter, and entered into an alliance with him against Ptolemy Philadelphus, —and this association with the names of Antiochus and Ptolemy, generally but not accurately known, may have led to his being enumerated with the two other princes of the same designation, Ptolemy Philopator, and Antiochus the Great. There was a Magas also, the brother of Philopator, but he is of no historical note, and was put to death by his brother in the beginning of his reign. The allusion is, therefore, no doubt to the Magas of Cyrene.

It is impossible to explain the *juxta-position* of the other two names, Antigonos and Alexander, upon any principle of chronological computation, although we can easily comprehend how the names were familiarly known. That of Alexander the Great must of course have left a durable impression, but he is antecedent to any of his generals who made themselves kings after his death. It is very unlikely that his

son Alexander, who was not born till after his death, and from the age of three years was brought up in Macedonia, where he was murdered when only twelve years old, should be the person intended, and a greater probability would attach to an Alexander who was Satrap of Persia in the beginning of the reign of Antiochus the Great, and rebelled against him. He was defeated and killed, *a.c.* 223. So far therefore we have an Alexander contemporary with Antiochus, if that be thought essential; but it seems more likely that here, as in the case of Magas, the concurrence of names is no evidence of synchronism, and arises from the name being familiarly known without any exact knowledge of the persons by whom they were borne.

Such seems to be the case also with respect to Antigonus. The most celebrated of the name, Alexander's general who succeeded to the sovereignty of Phrygia and Lydia, extended his authority to the East by the defeat and death of Eumenes, and his name may thus have become known in India, although the scene of his victories over his rival was somewhat remote from the frontier, or in Persia and Media. The latter portions of his career were confined to Asia Minor and Greece, and he was killed *a.c.* 301. He was contemporary with the first Ptolemy, but not with Antiochus, having been killed twenty years before the accession of Antiochus Soter. We have another Antigonus, the grandson of the preceding, who was contemporary with Antiochus Soter, but his life was spent in Macedonia and Greece, and it is not likely therefore that any thing should have been known of him in India. It can only be the first Antigonus whose designation reached an Indian prince, and the mention of him in conjunction with Ptolemy, Antiochus, Magas, and Alexander, shows clearly that the chronology of the inscription was utterly at fault, if it intended to assign a contemporary existence to princes who were scattered through, at least, an interval of a century. We must look, therefore, not to dates, but to the notoriety of the names, and the probability of their having become known in India, for the identification of the persons intended. Under this view, I should refer Alexander to Alexander the Great, Antigonus to his successor, Magas to the son-in-law of Ptolemy Philadelphus, Ptolemy to either or all of the four first princes of Egypt, and Antiochus to the only one of the number who we know from classical records did visit India, and who, from the purport of the inscriptions, we may infer was known there personally,—Antiochus the Great.<sup>1</sup> In this case we obtain for

<sup>1</sup> [I append Major Cunningham's criticism on these arguments.] 'The minor difficulties of chronology, which form Prof. Wilson's last objection (*Jour. Roy. As. Soc.*, vol. xii, p. 244), are easily disposed of, for they seem to me to have arisen solely from the erroneous assumption that Priyadarai must have been a contemporary of Antiochus the Great. In the Girnar and Kaper di Gir rock inscriptions, King Priyadarai mentions the names of five Greek princes who were contemporary with himself. Of these four have been read with certainty—Antiochus, Ptolemy, Antigonus, and Magas; and the fifth has been conjectured to be Alexander, James Prinsep, who first read these names, assigned them to the following princes:—Antiochus II., Tiberius of Syria, *a.c.* 364–347; Ptolemy II., Philadelphus of Egypt, *a.c.* 282–246; Antigonus, Gomarus of Macedonia, *a.c.* 276–213; Magas of Cyrene, *a.c.* 338; and with these identifications the learned of Europe have generally agreed. 'The fifth name has been read by Mr. Norris as Alexander; and if this reading is correct, we may identify this Prince with Alexander II. of Ipeiros, who reigned from *a.c.* 272–254; but the two copies of this name, published by Mr. Norris, from facsimiles by Masson and Court, appear to me to read *Ali Isha Sunari*, which may be intended for Ariobarzanes III., King of Pontus, who reigned from *a.c.* 266–246. But in either case the date of Priyadarai's inscription will be about *a.c.* 260–258, shortly preceding the death of Magas.'—*Bhilsa Topes*, p. 111. 'To some it may seem difficult to understand how any relations should exist between the Indian Asoka and the Greek princes of Europe and Africa; but to me it appears natural

the date of the inscription some period subsequent to a.c. 203, at which it seems very unlikely that Asoka was living.

To obviate the chronological difficulty it has been suggested that the Antiochus alluded to is not Antiochus Magnus, but Antiochus Theos, who reigned from a.c. 261 to a.c. 246, and who would therefore be contemporary with Asoka. This is no doubt true, but as intimated above, historical events are opposed to the maintenance of any friendly connexion between the princes of India and Syria during the reign of Antiochus Theos. At its very commencement he was involved in hostilities with the King of Egypt; the war continued during the greater portion of his reign, and amongst its results, were the neglect and loss of the Eastern provinces. Media and Bactria became independent principalities, and their geographical, as well as political position must have completely intercepted all communication between India and Western Asia. It is very unlikely that an Indian sovereign would have promulgated any alliance with the enemy of his immediate neighbours, and we should rather look for the names of Arsaces or Theodotus in his edicts, than that of Antiochus Theos. We cannot, therefore, upon historical grounds admit the identity of the Antiochus of the inscriptions with Antiochus Theos, any more than we can recognise an alliance between Asoka and Antiochus Magnus, as chronologically probable upon such premises as we derive from classical Paganism, and partly Buddhist data.

If, indeed, we are guided solely by the latter, we shall render the synchronism of the two princes still more impossible. According to the Dipavamsa and Mahāvamsa, Piyadasi was inaugurated two hundred and eighteen years after the death of Budhisa; his inauguration took place four years after his accession, and we place the latter therefore two hundred and thirteen years after the Nirvāṇa of Gautama. The date of this event was a.c. 543, and 543-714 a.c. 329, and Asoka, therefore, ascended the throne, according to the Buddhists, before the invasion, not of Antiochus, but of Alexander the Great. This, however, must be wrong, and Mr. Turnour acknowledges that the chronology of the Buddhist chronicles is here at fault; he makes the error amount to about sixty years, and observes that it was an intentional violation of the chronology: with what purpose he has not explained. It is enough for us to determine that Asoka cannot have been the contemporary of Antiochus the Great, according to the chronology either of Brahman or Buddhist. That Piyadasi was the contemporary of Antiochus, or even posterior to him, is evident from the inscription, and therefore Piyadasi and Asoka are not one and the same person. That Asoka became a convert to Buddhism after commencing his reign as a sanguinary tyrant, may or may not be true: we have only the assertions of the Buddhists for the fact. But allowing it to be true, if Asoka was not the author of the edicts in question, no inference of their Buddhist character can be drawn from his conversion to the faith of Buddha, and the uncertain evidence afforded by their language is not rendered less equivocal by any positive proof of their having been promulgated by a prince who was a zealous patron of the doctrine of Śākyamuni.

But who then was Piyadasi, the beloved of the gods? This is a question not easily answered. The term is evidently an epithet applied to more than one individual, and not the proper designation of any one person exclusively. We have

and obvious. Asoka's kingdom on the west was bounded by that of Antiochus; his father, Bindusara, had received missions from Antiochus, Seleus, and Ptolemy Philadelphus; and as Asoka was 45 years of age when he was inaugurated, in a.c. 269, he might have conversed with both of the Greek ambassadors, Daimachos and Dionysios.—112.



no such name in any of the Brahmanical traditions, and find it in the Buddhist, as indicating a sovereign prince, to whom it could not have been applied consistently with chronological data, upon the authority of a work of the fourth century of our era. That any uncertainty with regard to its appropriation should exist, seems very incompatible with the extent of the dominions ruled over by the prince of the inscriptions, as far as we are to infer, from the sites in which they are found, as Gujarrat, Katak, Behar, Dilli, and the Panjab. A monarch, to whom all India, except the extreme south, was subject, must surely have left some more positive trace of his existence than a mere epithet complimentary to his good looks, and shared with many others of equally pleasing appearance. That such almost universal sovereignty in India was ever exercised by a single prince is extremely improbable, and it is undeniable, from the evidence of the inscriptions themselves, that they have not been sculptured, in the situations in which they occur, contemporaneously with the year of any individual reign. That, in all the rock inscriptions, the third and fourth edicts are said to be issued in the twelfth year of Piyadasi's inauguration; the fifth and eighth, in the tenth year: the two later edicts, in point of time, taking precedence of the two earlier, in the order of inscription—an utter impossibility. We can only infer, therefore, that they were simultaneously inscribed. Mr. Prinsep states, that it is so specified in the Fourteenth Tablet, but I am unable to understand the passage in that sense. That it was the case, however, is obvious, from the inverted order of the dates, and from the uniform appearance of the inscriptions. The whole must have been cut, therefore, at some subsequent period to the latest of the dates. How long subsequent, is another question of impossible solution; but it is very improbable that the rocks of Gujarrat, Dharoli, and Kapur di Giri, were all engraved at the same time. The operation must have been spread over some years, and it is not likely that it was subsequent to the date of their reputed author, if he ever had a real existence. It seems, however, not improbable, that the rulers of the several countries, or influential religious persons, adopted the shadow of a name, to give authority to the promulgation of edicts intended to reform the immoral practices of the people, and for that purpose repeated documents which had acquired popular celebrity in some particular locality not yet ascertained.

From these [and other] considerations, I have been compelled to withhold my unqualified assent to the confident opinions that have been entertained respecting the object and origin of the inscriptions. Without denying the possibility of their being intended to disseminate Buddhism, and their emanating from the Maurya prince Asoka, there are difficulties in the way of both conclusions, which, to say the least, render such an attribution extremely uncertain.

[ I have allowed Prof. Wilson to state his doubts and difficulties at greater length than I should have conceded to him, had I not been prepared to contest his leading inferences.

I do not, however, design to enter upon any critical examination of the minor evidences and coincidences the Professor has sought to reconcile; as, with a doubtful text, an avowedly imperfect interpretation, with one of the historical names only partially legible and dates conflicting *inter se*, the most elaborate solution could not but fail to prove unsatisfactory. And further,

I am disposed to accept, with added force, all that portion of the Professor's deductions which implies crass ignorance of Syrian and Grecian events on the part of the compilers of Piyadasi's Edicts. Still, there are some obvious facts upon which we may fairly speculate. It is clear that Antiochus, as spoken of in these inscriptions, was, at the moment of their composition, the most prominent personage of the western world within the ken of the Indian court. That Antiochus *saka* is the sovereign alluded to many miscellaneous items of evidence, now available, tend to show. These points being admitted, it would seem to follow, from the expressions made use of in the second tablet, that the defection of the Bactrians under Diodotus—assigned to 250, B.C.—had not, up to this time, developed itself. The allusion to the four kings it is less easy to explain, nor is it obvious why that particular number should have been selected. As the text does not enable us to say what position these kings held in reference to the more influential Antiochus, speculations on this head must, of course, be next to futile. Certainly the satisfactory explanation of the coincidences of the given names, with any combination of the then-existing monarchical distributions, remains to be accomplished: whether the record aimed at a mere vague selection of the more generally known Greek names to complete the list, or whether, as is just possible, there was some indefinite remembrance of the quadruple alliance (311, B.C.), of which Seleucus was the subordinate confederate and local representative during his Indian expedition, and of the eastern rights and titles of which Antiochus became the apparent heritor, it would be rash to assert; but it is clear that the designations of two of the parties to this league open the list, and whether *MAGAS* represents the Cyrenian, or some other of the name, or stands as the curtailed corruption of that of Lysimachus, while *Ali Kasunari*<sup>1</sup> may

<sup>1</sup> Masson's eye-copy of the Kapur di Giri inscription may be variously read, *Ali Kasunari*, *Ali Kasadari*, or, doubtfully, *Ali Kahanunari*. The initial letter is very uncertain, and might almost be read as a *G*. The third letter differs materially from the ordinary *DA*, and must either be the simple *K* of Court's copy or some compound of *SA*, under Masson's representation.

chance to do duty for Alexander, Cassander, or some living potentate whose cognomen had but lately reached Indian ears, we need scarcely stop to inquire.

In his first paper<sup>1</sup> on the Girnâr, Dhauli, and Kapur di Gîri edicts, Prof. Wilson expressed an opinion that, 'although the tenor of the inscriptions was not incompatible with a leaning to the religion of Buddha, yet the total absence of any reference to the peculiarities of the Buddhist system, left some uncertainty with regard to the actual creed of the râja, and his intimate connection with the followers of Buddha.'

In a subsequent article on the Bhabra inscription<sup>2</sup> the Professor frankly admits that, 'although the text is not without its difficulties, yet there is enough sufficiently indisputable to establish the fact, that Priyadasi, whoever he may have been, was a follower of Buddha.'<sup>3</sup> Our leading Orientalist, it will be seen, still hesitates, therefore, to admit the identity of Priyadasi and Asoka. With all possible deference to so high an authority, I am bound to avow that I see no difficulty whatever in the concession. We may stop

<sup>1</sup> 'Jour. Roy. As. Soc.', vol. xii. (1858), cited nearly in extenso above.

<sup>2</sup> 'Jour. Roy. As. Soc.', vol. xvii. (1863), p. 337. *Supra cit.*

<sup>3</sup> The inscription opens thus: 'Priyadasi, the king, to the venerable assembly of Mâghadha, commands the infliction of little pain, and indulgence to animals. It is verily known, I provision, to what extent my respect and fervor (are placed) in Buddha, in the law, and in the assembly. Whatever (words) have been spoken by the divine Buddha, they have been well said,' etc.—See also 'Jour. As. Soc. Beng.' 1840.—Lassen 'Indische Alt.' ii. 221. [I annex to these notes on the Bhabra inscription some interesting speculations of Bourouff's, as to the nature of the monument itself, and the probable purpose for which it was shaped.] 'C'est, ainsi que l'a bien vu M. Ritter, une masse adressée par le roi Priyadasi à l'Assemblée des Religieux réunie à Pataliputra, capitale du Magadha, pour la suppression des schismes qui s'élevaient alors parmi les Religieux bouddhistes, assemblée qui, selon le Mahāvastu, eut lieu la dix-septième année du règne d'Asoka. La forme est en elle-même très-remarquable. L'inscription, en effet, n'est pas gravée comme les autres monuments de ce genre qui portent le nom de Priyadasi, soit sur une colonne monolithique, soit sur la surface d'un rocher adhérent aux flancs d'une montagne. Elle est écrite, et très-séparément, sur un bloc détaché de granit qui n'est ni d'un volume ni d'un poids considérable, n'ayant que deux pieds Anglais sur deux de ses dimensions, et un pied et demi sur la troisième. Ce bloc, de forme irrégulière, peut être aisément transporté. . . . C'est une lettre que le roi a fait graver sur la pierre avec l'intention avouée d'assurer la durée de cette expression si claire de son orthodoxie, peut-être aussi avec celle de faire transporter facilement et sûrement cette singulière minuscule dans les diverses parties de l'Inde où se trouvaient des Religieux. . . . L'inscription est écrite dans l'ancien dialecte Mâghadhi.'—'Le Lotus de la bonne Loi,' p. 727, 728.

short of absolute and definite proof, that Asoka enunciated his edicts under the designation of Priyadasi, 'the beloved of the gods;' but all legitimate induction tends to justify the association, which is contested by no other inquirer.<sup>1</sup> To assert that the edicts themselves do not accord in spirit with the exclusive intolerance attributed to Asoka by his Buddhist successors, is merely to show that they misrepresented his aims and desires in this respect, as they palpably misinterpreted and altered many of the original tenets of the religion itself.

As a fitting conclusion to these commentaries, I append Prof. Wilson's remarks on the language of the edicts:—]

The language itself is a kind of Pāli, offering for the greater portion of the words forms analogous to those which are modelled by the rules of the Pāli grammar still in use. There are, however, many differences, some of which arise from a closer adherence to Sanskrit, others from possible local peculiarities, indicating a yet unsettled state of the language. It is observed by Mr. Prinsep, when speaking of the Lāi inscriptions, "The language differs from every existing written idiom, and is as it were intermediate between the Sanskrit and the Pāli." The nouns and particles in general follow the Pāli structure; the verbs are more frequently nearer to the Sanskrit forms; but in neither, any more than in grammatical Pāli, is there any great dissimilarity from Sanskrit. It is curious that the Kāper di Giri inscription departs less from the Sanskrit than the others, retaining some compound consonants, as *pr* in *priya* instead of *piya*; and having the representation of the three sibilants of the Devanāgarī alphabet, while the others, as in Pāli, have but one sibilant: on the other hand, the Kāper di Giri inscription omits the vowels to a much greater extent, and rarely distinguishes between the long and short vowels, peculiarities perhaps not unconnected with the Semitic character of its alphabet.

The exact determination of the differences and agreements of the inscriptions with Pāli on the one hand, and Sanskrit on the other, would require a laborious analysis of the whole, and would be scarcely worth the pains, as the differences from either would, no doubt, prove to be comparatively few and unimportant, and we may be content to consider the language as Pāli, not yet perfected in its grammatical structure, and deviating in no important respect from Sanskrit. Pāli is the language of the writings of the Buddhists of Ava, Siam, and Ceylon; therefore it is concluded it was the language of the Buddhists of Upper India, when the inscriptions were engraved, and consequently they are of Buddhist origin. This, however, admits of question; for although the Buddhist authorities assert that Sakya Sinha and his successors taught in Pāli, and that a Pāli grammar was compiled in his day; yet, on

<sup>1</sup> Turnour, *Jour. As. Soc. Beng.* vi. 1046, and vii. 930; Lassen, ii. 271; Burnouf, i. 633, ii. 775; Cunningham, *Bhilar Topes*, 108; Sykes, *Jour. Roy. As. Soc.* vi. 469; Müller, *Buddhism and Buddhist Pilgrims*, p. 23.

the other hand they affirm, that the doctrines of Buddha were long taught orally only, and were not committed to writing for four centuries after his death, or until a.n. 153, a date, no doubt, subsequent to that of the inscriptions. In fact, the principal authorities of the Cingalese Buddhists appear to have existed in Cingaloss, and to have been translated into Pālī only in the fifth century after Christ.

According to M. Burnouf and Mr. Hodgson, the earliest Buddhist writings were not Pālī but Sanskrit, and they were translated by the Northern Buddhists into their own languages, Mongol and Tibetan. It does not appear that they have any Pālī books. The Chinese have obtained their writings from both quarters, and they probably have Pālī works brought from Ava or Ceylon. They have also, according to M. Burnouf, translations of the same Sanskrit works that are known in the North. It is by no means established, therefore, that Pālī was the sacred language of the Buddhists at the period of the inscriptions, and its use constitutes no conclusive proof of their Buddhist origin. It seems more likely that it was adopted as being the spoken language of that part of India where Piyadasi resided, and was selected for his edicts, that they might be intelligible to the people. Hence, also, the employment of different alphabets, that of Kaper di Giri being the alphabet current in Affghanistan and Bactria, as we know from the Greco-Bactrian coins. The use of the provincial or local alphabet was evidently designed for the convenience of those to whom it was familiar, while the ancient form of the Devanāgarī was that employed in Hindostān as being there in general use. The popular currency of the language, admitting that it might have been the spoken dialect of the north-west of India, would be more likely to prevent, than to recommend its use as a 'sacred' language, and its being applied to such a purpose by the Southern Buddhists was in some degree probably owing to their being as a people ignorant of it, and it would then assume in their eyes a sanctity which as a spoken dialect it was not likely to possess. At the same time, we can scarcely suppose that the language of the inscriptions was understood in all the countries where they have been discovered, beyond the Indus, at Delhi, in Behar, in Orissa, and Gujerāt, where we know that very different dialects, however largely borrowing from a common source, at present prevail. Neither is it likely that edicts intended to regulate the moral conduct of the people at large should have been intelligible only to Buddhist priests, or should have been perpetuated on pillars and rocks solely for their edification. We may therefore recognise it as an actually existent form of speech in some part of India, and might admit the testimony of its origin given by the Buddhists themselves—by whom it is always identified with the language of Magadha or Behar,<sup>1</sup> the scene of Sakya Sinha's first teaching—but that there are several differences between it and the Māgadhi, as laid down in Prakrit grammars, and as it occurs in Jain writings. It is, as M. Burnouf and Lassen remark, still nearer to Sanskrit,<sup>2</sup> and may have prevailed more to the north than Behar, or in the upper part of the Doab, and in the Panjāb, being more analogous to the Sauraseni dialect, the language of Mathura and Delhi, although not differing from the dialect of Behar to such an extent as not to be intelligible to those to whom Sakya and his successors addressed themselves. The language of the inscriptions, then, although necessarily that of their date, and probably that in which the first propagators of Buddhism expounded their doctrines, seems to have been rather the spoken language of the people in Upper India, than a form of speech peculiar to a

<sup>1</sup> Turner's 'Introduction to the Mahāwanso,' xxi., 8a Māgadhi mula bhāsa.

<sup>2</sup> Essai sur le Pālī, p. 187, 'La Pālī était presque identique à l'idiome sacré des Brâhmanes, parce qu'elle en dérivait immédiatement.'

class of religionists, or a sacred language, and its use in the edicts of Piyadasi, although not incompatible with their Buddhist origin, cannot be accepted as a conclusive proof that they originated from any peculiar form of religious belief.<sup>1</sup>

[In a subsequent paper 'on Buddha and Buddhism' (J.R.A.S., xvi. 229), Professor Wilson enters more comprehensively into the linguistic question touched upon in the above note: the following extracts will put the reader in possession of that author's present view in regard to the comparative antiquity of the use of Sanskrit and Pāli<sup>2</sup> in the Buddhist Scriptures:—

The great body of the Buddhist writings consists avowedly of translations; the Tibetan, Mongolian, Chinese, Cingalese, Burmese, and Siamese books, are all declaredly translations of works written in the language of India—that which is commonly called *Fan* or more correctly *Fan-fo-ssu*, 'or the language of the Brahmans;' and then comes the question, to what language does that term apply? Does it mean Sanskrit, or does it mean Pāli, involving also the question of the priority and originality of the works written in those languages respectively; the Sanskrit works as they have come into our hands being found almost exclusively in Nepal, those in Pāli being obtained chiefly from Ceylon and Ava. Until very lately, the language designated by the Chinese *Fan* was enveloped in some uncertainty.

The mystery, however, is now cleared up. In the life and travels of Hsueh Tsang, written by two of his scholars and translated from the Chinese by M. Julien, the matter is placed beyond all dispute by the description and by the examples which the Chinese traveller gives of the construction of the *Fan* language, in which he was himself a proficient. . . . We learn from him. . . . All this is Sanskrit, and what is

more to the point, it is not Magadhi, the proper designation of the dialect termed in the south, Pāli. . . . Hsueh Tsang also correctly adds that the grammar in use in India, in his time, was the work of a Brahman of the north, a native of Tulu or Śhikola, named *Pa-ni-ni*, or Panini, the well-known Sanskrit grammarian. . . .

The Buddhist authorities of India proper, then, were undeniably Sanskrit; those of Ceylon might have been Pāli or Magadhi; were they synchronous with the Sanskrit books, or were they older, or were they younger, more ancient, or more modern?

We may be satisfied, therefore, that the principal Sanskrit authorities which we still possess were composed by the beginning of the Christian era at least; how much earlier is less easily determined.

We may consider it, then, established upon the most probable evidence, that the chief Sanskrit authorities of the Buddhists still in our possession were written, at the latest, from a century and a half before, to as much after, the era of Christianity.

Now what is the case with the Pāli authorities of the south? . . . The principal Pāli works of the south, are, therefore, of a period considerably subsequent to the Sanskrit Buddhistical writings of India proper, and date only from the 5th century after Christ.

<sup>1</sup> Pāli, means—original text, regularity.—Maha. Introd. xiii.



Professor Max Müller seems to concur in these deductions, judging from his remark :—

'After Buddhism had been introduced into China, the first care of its teachers was to translate the sacred works from the Sanskrit, in which they were originally written, into Chinese.'—'Buddhism and Buddhist Pilgrims,' p. 24. London, 1857.

Col. Sykes, however, I observe, still considers that he has evidence to show that 'the books taken from India to China by the Chinese travellers between the fourth and seventh centuries were equally in Pāli' (*Times*, May 21, 1857), basing his argument to that end upon M. Gutzlaff's catalogue of 'Chinese Buddhistical Works,' published in vol. ix. of the '*Jour. Roy. As. Soc.*,' p. 199 (1848).



## XVIII.—RÉSUMÉ OF INDIAN PĀLĪ ALPHABETS.

[In continuation of the subject treated of in the supplement to Art. XVII.; p. 8, I extract the substance of Prinsep's 'Completion of the Pāli Alphabet,' which the decipherment of the Girnār text of the edicts of Asoka enabled him to verify.]

First, however, I must take a review of the Girnār alphabet, for it is evident that it contains many additions to the more simple elements of the pillars. These additions, to which only I have time to allude, will be found to complete the alphabet to the existing standard of the Pāli of Ceylon.

The most remarkable change observable in the alphabet has already been noticed in my paper of last June, namely, the substitution of the letter *ṛ* for *ṛ* in all words now written with an *r* in Sanskrit, but on the pillars spelt with an *ṛ*, as *ṛṛṛṛṛṛ*, etc., now corrected to *ṛṛṛṛṛṛ* *riṇṇa*, *daṇṇaṇṇa*, etc. Although there are many words in the Sanskrit in which the use of the *ṛ* and *r* is indifferent, still the invariable employment of the former liquid, does not appear to have been ascribed to any of the numerous Prakṛits or even the Apabhṛāṇṇas, by the Sanskrit grammarians.

Of other letters made known by the Girnār tablets, we may notice first in order the *ḷ* or *ḷ*, which can no longer be denied a place, or be confounded with any other letter, because it now occurs in the well known word *gharistāni* (S. *gṛihastāni*), and in *meyha*, *ghara*, *ghāta*, etc., of the Kalinga and Sālohadri inscriptions. These words, it must be observed, occur only in those tablets of the Katak inscription wherein the letter *ṛ* is used, and which so far resemble in dialect those of Girnār. The orthography of *gṛihastāni* on the pillars is *gharistāni*. It does not therefore follow necessarily, though there is every probability thereof, that the *ḷ* is never used for *ḷ*; but when we find the aspirate

present in other words of the same monuments, such as *ghanti*, *sanghathasi*, etc., we are bound not unnecessarily to aspirate the simple *g*, where it can be read without doing so.

The nasal of the first class of consonants, or gutturals, has not been yet recovered, because its place is generally supplied by the *anusevara*; but in one or two places I think the ञ may be traced in its primitive form of ञ: at any rate it may be safely constructed so, from the analogy of the form in No. 2 alphabet ञ also found on the coins in the name *Sinha vikrama* (written sometimes *singha*), and from the more modern form of the Tibetan ञ *ng*.

The letter *jā* ञ is of rare occurrence, even in the Sanskrit. It is not therefore to be wondered at, that we should be tardy of discovering it in the ancient alphabet. Yet in Pāli this letter takes the place of the Sanskrit ञ in *madhya*, *madhyama*, 'middle,' and perhaps of *vy* in *nirjita* and of *vy* and *vy* and other similar compounds which in pronunciation assimilate to *jā*: and it is thus more likely to be found in a Pāli than a Sanskrit monument. On my first review of the pillar alphabet, I was inclined to look upon the letter *ṛ* as *jā*, from its occurrence in the word *ṛṣṭ* *ṛṣṭ*, coupled with *akasa* and *gerayā*, domestic and ascetic, but it seemed better explained by *ri* in other places. A similar expression in one of the Gīmār tablets again leads me to consider it as *jā*, viz.: '*samkhilena, majjamasā, vītilena*,' where the central word is written *ṛṣṭ* both in the Gīmār and in the Dhaulī versions of the concluding paragraph. Again, in the pillars it is generally inflected with the *i* or the *e* vowel mark, which could not be the case with *ri*: and lastly, it bears considerable affinity to the Bengali *ja* which also resembles the *ri* of the same alphabet; I therefore now pronounce *ṛ* without hesitation to be a *jā*: and I must modify former readings accordingly.<sup>1</sup>

The *w* of the second class, or palatials, is an acquisition upon which there is no room to doubt. It is a peculiarity in the Pāli language that this letter, which has the pronunciation of *ng*, both supplies the place of the Sanskrit compound letter *ṃ* in such words as *rājasa* राजसः

<sup>1</sup> This it is not difficult to accomplish: ex. gr. in the western tablet of the Feroz list, *ānantaṃ nijaṃpayaṃ dānandakāraṃ*, may be Sanskritized as follows: **नाशतेनिर्धा पायित्वा दानं दास्यन्ति**, 'expelling the murderer (from the town or community) they shall give him an alms.' And in the edict regarding animals,—*ta se sive nijaṃpayaṃ dānandakāraṃ*—'such while life remains shall not be abandoned,' **उन्मत्तापयितवः**; and, in the last tablet, for *ānantaṃ nijaṃpayaṃ dānandakāraṃ*, read **निर्वृत्यभवित्**, 'the rules of dharma shall be invincible.'



from the Sainhadri form; the other I have traced on the Saurashtra coins of Skanda and Kumāra Gupta, where sometimes the one and sometimes the other form is employed, the latter being the natural course followed by the pen in imitating the sculptured letter *ṣ*, beginning at the top, viz. : *Ṣ*, whence would gradually follow *Ṣ̣*, and *Ṣ̣̣* with the headstroke, common to all the modern characters.

The Pālī contains but one *s*. We cannot, therefore, expect to find in our ancient alphabet the prototype of either the Sanskrit *ṣ* or *ṣ̣*. Of these letters I only notice the early forms, because I have inserted them in the accompanying lithographed plate. The modern form of *ṣ̣̣* would seem to be derived from the *Ṣ̣̣* of the Samudragupta, or No. 2 alphabet, where again it might be presumed that it was introduced as a trifling modification of the letter *Ṣ̣̣*, or *s*,—in fact, by closing the outer stroke or doing the same thing to this as was done to the *p*, to have the effect of duplication or aspiration. Or, it may be more proper to consider it a *written* modification of the more ancient form *t* found on the copper-plate grants of the third century dug up in the Gujarāt peninsula, whence the transition is more evident and palpable to the various Pālī and Sinhalese forms, the Cashmere form and even the modern Nāgarī and Bengālī.

It is not so easy to trace the origin of the *tālība śha*, *ṣ̣̣̣*, in the old alphabet, but there is plausible reason to suppose that this was originally merely the *śurdīna* or cerebral *s* *ṣ̣̣̣*, turned in an opposite direction, invented to denote another modification of the sibilant required in the refinement of the Sanskrit alphabet. In the oldest Gujarātī plates, these are written with simple linear marks in the middle, and exactly the same structure is retained in the square Pālī alphabet or stone letter of Barma, except that the stroke in the centre is contracted into a dot; further, they are merely rounded in the modern Burmese for the facility of writing. In no other alphabets that I know of are the analogies to the original type so faithfully preserved as to shew that these two sibilants were originally the same letter reversed in position, a mode frequently adopted, as I have had occasion to notice before, in Indian alphabets, to represent slight modifications in sound (see vol. vi. p. 475-6.)

The most ancient Sanskrit form, however, of the *tālība śh* is one I have just discovered on a genuine inscription of the time of Chandragupta [Sāh Inscription]. This type is evidently the original of the form so common on early Hindu coins and inscriptions, whence are directly descended the Tibetan *ṣ̣̣̣̣*, the Bengālī *ṣ̣̣̣̣*, and the modern Nāgarī *ṣ̣̣̣̣*, which heretofore presented a kind of anomaly in the derivation of our alphabetical symbols.

Having thus recovered the complete, and, as I consider it, the primeval alphabet of the Indian languages, I have arranged in the accompanying plate the changes each letter has undergone in successive centuries, as deduced from absolute records on copper or stone. The table furnishes a curious species of palæographic chronometer, by which any ancient monument may be assigned with considerable accuracy to the period at which it was written, even though it possess no actual date.

I begin with the sixth century before the Christian era, because I suppose that the alphabet which we possess, as used by the Buddhists of a couple of centuries later, was that in which their sacred works had been written by the contemporaries of Buddha himself, who died in the year 543 *a.c.*

What in some measure confirms this hypothesis is, that the Sanskrit character of the third century before Christ (of which I have introduced a specimen in the plate from the genuine document above alluded to), differs only so much from the original form as the habits of a class of writers distinct in religion and more refined in language might naturally introduce;—just as we afterwards find an equal degree of modification from the type of Asoka's time, in the Sanskrit alphabet of five centuries later, on the pillars.

The Asoka alphabet (the Sanskrit one) agrees very closely with that of our Sauráshtra coins, which may thence be pronounced to be anterior to the Gupta series. The Gujarát plates, dated in the third century of the Samvat era, differ but little from the Allahábád pillar or



Samudragupta inscription, but that little is all in favour of their superior antiquity.

Of the more recent alphabets it is unnecessary to say anything. The Tibetan is acknowledged to be of the seventh century. The Kuṭila alphabet is taken from the inscription sent down in facsimile by Col. Stacey from Bareilly;—we learn thence that the artist was of Kanauj; and we see that the Bengālī, which was drawn from the same focus of learning nearly a century afterwards, does not differ more from it than the modifications it has undergone since it was domiciled in the lower provinces will explain;—indeed, all old Sanskrit inscriptions from Benáres to Katak differ only from the Kuṭila type in having the triangular loop  $\text{३}$ , instead of the round one  $\text{४}$ .

A hundred other modifications of the primitive character might be easily introduced were I to travel southward or to cross to Ava or Ceylon; but I purposely avoid swelling the table, and include only those epochas of the Indian alphabet which can now be proved from undeniable monuments. On a former occasion,<sup>1</sup> the Amara-vati, Hala Canara, and Talinga alphabets were traced to the Gupta as their prototype, and thus might others be deduced; but another opportunity must be sought of placing the whole in a comprehensive table.

In conclusion, I may again regret that our printers did not take for their standard the form that would have served to blend the Bengālī and the Hindī into a common system!

[Prinsep's observations introductory to his Chronological

<sup>1</sup> *Jour. As. Soc., Beng.*, vol. vi., p. 219 (March, 1827).









Table of Alphabets appear to have been designedly brief, as the several series had already been freely examined and decanted upon in the occasional Essays which had from time to time been devoted to the independent illustration of each. The definition of almost every letter was now an accepted fact, and under the treatment of Prinsep's practised eye and ready hand, each form might be compared in its multiple transitions and ramifications, by the veriest tyro in Indian Palæography. I have copied, *literatim*—in pl. xxxvii., xxxviii.—his original synopsis; but as his labours in elucidation of these, and other cognate alphabets, were detached and scattered over many volumes and numbers of the Journal he so long and efficiently edited, I have taken advantage of the facilities afforded by the imitative faculty of our German neighbours, who have reproduced, in movable types, these and some further varieties of the local characters first deciphered by my author,—to introduce into a printed table many of the older forms omitted in the lithograph; and I have further profited by the progress of type-founding, to add to the general series certain provincial alphabets, which illustrate the literal changes incident to independent naturalization, as well as those due to epochal departure from the parent stock.

It will be seen from this observation, that I have ventured to differ from my elsewhere usually accepted authority; but in this case, his unvarying frankness and candour have of themselves paved the way for my justification, and I doubt not that, had his intellect been spared to us, he would himself have been prompt to reduce to a more consistent and mature theory, the imperfect hypothesis somewhat hastily enunciated on the initiatory publication of these fac-similes.

The general subject of the rise and transitional development of Indian alphabets spreads itself over various sections of research, and requires to be considered from different points of view, the more prominent of which I will endeavour to recapitulate as concisely as possible.



I. Regarding the probable date of the earliest use of the type of character, of which Asoka's edicts present us with the first extant example, Prinsep hazarded an opinion that two centuries of anterior currency might fairly be assigned to that style of writing. This idea pre-supposed somewhat of an exclusively sacred character, as pertaining to the alphabet; but by no means implied that the literal series did not pre-exist in an earlier or less perfect form. A conjectural limit of this description may of course be indefinitely extended or contracted, but I myself should be disposed to enlarge considerably the period of the previous culture of so perfect and widely-spread a system of alphabetical expression.<sup>1</sup>

II. As respects the derivation of the literal series, Prinsep had clearly a leaning towards associating it with the Greek, grounded upon the similarity and almost identity of some of the forms of each, the phonetic values even of which fell into appropriate accord. That these similitudes exist there can be no doubt, but not in sufficient numbers or degree to authorise an inference that the one system borrowed directly from the other. Prof. Weber, following out Prinsep's idea in another direction, has sought to establish a Phœnician origin for the Indian alphabet.<sup>2</sup> This theory I regard as altogether untenable, for we not only have to get rid of the inversion of the direction of the writing—sufficiently intelligible in the case of the Greek derivative from that stock—but we have to concede a much larger amount of faith to fanciful identities of form; and lastly, we have to place this excellently contrived alphabet in juxtaposition

<sup>1</sup> Hien Tsang gives the following account of the origin and spread of the Indian alphabet:—"Les caractères de l'écriture ont été inventés par le dieu Fan (Brahmā) et, depuis l'origine, leur forme s'est transmise de siècle en siècle. Elle se compose de quarante-sept signes, qui s'assemblent et se combinent suivant l'objet ou la chose qu'on veut exprimer. Elle s'est répandue et s'est divisée en diverses branches. Sa source, s'étant élargie par degrés, elle s'est accommodée aux usages des pays et aux besoins des hommes, et n'a éprouvé que de légères modifications. En général, elle ne s'est pas sensiblement écartée de son origine. C'est surtout dans l'Inde centrale qu'elle est nette et correcte."—*Mémoires, etc.*, p. 72.

<sup>2</sup> Ueber den Semitischen Ursprung des indischen Alphabets.—*Zeitschrift*, 1846, p. 329.

and contrast with a system of writing manifestly claiming a quasi-Semitic parentage, but as imperfect and ill-adapted for the expression of Indian languages as it is possible to conceive, which we find in concurrent use in the contiguous provinces of Northern India. Certainly, to judge by internal evidence, the Pālī alphabet of Asoka's day bears every impress of indigenous organization and local maturation under the special needs and requirements of the speech it was designed to convey. Though, amid the marvels that are daily coming to light in regard to the march of languages and the varieties of the symbols employed to record the ancient tongues, it might be possible to concede so much of identity to the two sets of characters as a common but indefinitely remote starting point might be held to imply.<sup>1</sup>

III. Was the Pālī alphabet sacred or profane? classic or vernacular? monumental or popular? The answer to these queries must, I think, be decidedly against its exclusive devotion to the former, in any case; it will be safer to say that, up to a certain period, it was employed both for one and the other, and stood as the sole medium of graphic communication. This primitive character may well have proved sufficient for all purposes of record, so long as the language it was called upon to embody remained as simple as that for expression of which we may suppose it to have been originally designed

<sup>1</sup> [M. Barthélemy St. Hilaire, in a review (*Journal des Savants*, January, 1857), of the valuable work of M. E. Renan, on the Semitic Languages (Paris, 1855), enters into an examination of the relative claims to priority of the Indian and Phœnician alphabets. His remarks on the remote antiquity and independent and spontaneous elaboration of the Indian alphabet are sound, but the general argument is marred by a want of due discrimination between the Pālī and Sanskrit influences, and is deficient in all reference to the co-existent Semitic systems of writing of the northern provinces. Though I do not concur in any conclusion that one alphabet must necessarily have been derived from the other, I append M. St. Hilaire's opinion on the question as it stands between the two:—"Je ne vois pas qu'il repasse à la raison que le système le plus parfait de l'alphabet soit aussi le plus ancien. L'alphabet sémitique n'est pas précisément plus simple, quoique moitié plus court; il est, à vrai dire, moins complet. Pour ma part, je comprends mieux les Sémites recevant de troisième ou quatrième main l'alphabet indien, et l'adaptant à leur usage, en le réduisant de moitié et en le modifiant, que je ne comprends les Indiens recevant cet alphabet informe et confus et le portant à la perfection que nous aurons."—p. 52.]

and adapted. On the introduction of the Sanskrit element, it was necessarily subjected to previously-needless combinations, and under this and other processes perhaps lost some of the stiffness of outline, which it may, nevertheless, have retained together with its original literal simplicity among the vulgar,<sup>1</sup> even in the presence of an improved style of writing, suited for more polished literature; as in the existing orthography of Hindi, contrasted with the elaboration of Sanskrit alphabetical definitions.<sup>2</sup> Prinsep

<sup>1</sup> Major Cunningham speaks of 'the extremely rare use of compound letters' in the Buddhist legends engraved on the Bhiha Topes. He remarks, 'only three instances occur throughout all these inscriptions; and they are certainly exceptions to the common practice of Asoka's age, which adhered to the simplest Pāli form.'—*Bhiha Topes*, p. 268.

<sup>2</sup> [I have elsewhere noticed certain evidences bearing on this question, which I may append in further illustration of my present argument]: 'I imagine it must be remarked, whether on the indications afforded by inscriptions, coins, or Buddhist relics, that the ancient Pāli or Magadhi alphabet had once a very extended currency, and likewise that for a lengthened period it retained its separate identity. It occurs in Asoka's edicts at Dikhī, Allahabad, Math, Bakhra, Dhauh, and Girā; its appearance in these several localities would, *prima facie*, imply, either that it was intelligible to the people at large throughout the circle embraced within these geographical boundaries, or that it was the recognised sacred alphabet of Buddhists; opposed entirely to the latter supposition is the departure from its use in the Kapur di Giri text of the edict Beal, and the modification the language is seen to have been subjected to in some of the Pāli manuscripts, to meet apparently the local dialects of each site.' [I do not imply from this that the edicts were ordinarily designed to be within reach of the vision of the people, as was the case with the Greek tables, even if it was expected that the literary cultivation of the population at large was sufficient to create many readers.] 'On coins, the characters can scarcely be thought to hold any religious significance, but the available numismatic testimony contributes largely to the inference that these characters formed the ordinary medium of record in the majority of the states included within the limits above adverted to. In this alphabet exclusively are expressed the legends of numerous series of coins of purely local type,\* its characters are found associated on the one part with the Greek of Agathocles and Ptolemy,† and its phonetic signs are conjoined with counterpart Arian legends on certain classes of the Hephthalite coins.‡ The Bud-

\* Of the two stone pillars at Dikhī, one was moved down from near Khirābād, at the foot of the Himalayas—the other was taken from Mirā—*Jour. Arch. Soc. Delhi*, p. 79, 1839 [vol. i., p. 324].

† Other inscriptions in this character occur at—1. Saurāṣṭra—*Jour. As. Soc. Beng.*, vol. vi., pl. xxvii., p. 461, and vol. vii., pl. lxxii., p. 552; 2. Gya—Caves, *Jour. As. Soc. Beng.*, vol. vi., pl. xxxv., Nos. 1 and 2, p. 676; these are of the epoch of Dhanurtha, who followed Suysa, the immediate successor of Asoka! 3. Katak—Udayagiri Caves, *Jour. As. Soc. Beng.*, vol. vi., pl. li., p. 1072; 4. Katak—Khandagiri Rock, *Jour. As. Soc. Beng.*, vol. vi., pl. lvi., p. 1080. And we may now add a but slightly modified form of writing as discovered in the Mahāvēlī inscription in Ceylon. *Jour. Roy. As. Soc.*, vol. xii., p. 176.

‡ *Jour. As. Soc., Beng.*, vol. iv., pl. x. and xxxv., and vol. vii., pl. ix. and lxi.

\* *Jour. As. Soc., Beng.*, vol. v., pl. xxxv., p. 8 and 9; *Ariana Antiqua*, pl. vi., pp. 7, 8, 9, and 11.

† *Jour. As. Soc., Beng.*, vol. vii., pl. xxxii. [p. 293.]

himself has originated the inquiry as to how much a change of alphabetical symbols might be incident to the use of a more perfect language as compared with the necessities of the local Pāli; and to this I am disposed to attach even more weight than he apparently contemplated; the leading conception was suggested to him by the advance displayed in this direction by the Sāh inscription at Gīrnār, which, because it contained the name of Asoka, he conceived should be attributed to the reign of that monarch. He was content, therefore, to accept this system of writing as absolutely contemporaneous with that employed in the public edicts of the early patron of Buddhism. However, we need not now claim so distinct a concession as this, as Asoka's name is only made use of in the subsequent monument, as a whilom benefactor in a similar cause, for which the Sāh king claims credit at a later day.

IV. Among other causes that are liable to have affected the march of alphabetical divergence from the one fixed model, may be noted the cursive departure from the older form, which though not exclusively monumental, was evidently better suited for lapidary purposes than for facility and rapidity of expression by the amanuensis;<sup>1</sup> and, under this aspect, there would arise

*dhāt* relics do little towards elucidating the expansive spread of this style of writing; but—if rightly interpreted—they illustrate in a striking manner the antiquity of its ordinary employment in its even then fixed form." [This inference, however, does not necessarily militate against my conclusion that, at a subsequent period, and in exceptional localities, the Pāli language and the Pāli letters did not become the special sectarian vehicles of the Buddhist faith, as opposed to the Sanskrit tongue and its more copious alphabet, whose use was affected by the Brāhmins.] Dr. Stevenson remarks, in speaking of the Nasik cave inscriptions, "On the whole, we find that Brāhmins and Buddhists, in these early days of our era, lived in peace with one another, and were both favoured and protected by the reigning sovereigns; and that, among the former, the Sanskrit language was used in writing, and the Prākṛit by the latter; the two languages, probably, holding the same place to one another that the Sanskrit and the vernaculars do at present."—*Jour. Bomb. Br. Roy. As. Soc.*, July, 1853, p. 41.]

<sup>1</sup> [In my last paper on this subject I remarked, "We have evidence, in sufficient abundance, to prove that the eastern nations often availed themselves of a cursive hand, in common with the more formal character reserved for inscriptions. These would each be naturally affected, in the ultimate determination of forms—by the material which had to receive the writing."

"Thus, the straight wedge-shaped elements of the cuneiform alphabet" were

\* *Jour. Roy. As. Soc.*, vol. xiii., p. 108; 'Bhāṣa Topas,' p. 222, etc.

\* Layard, 'Discoveries,' etc., 346 and 601, etc., *Jour. Bomb. As. Soc.*, vol. xvi. p. 213.

a still more obvious reason for the rounding off of angularities as the complex orthography of the Sanskrit gained head upon the simple letters of the local Pālī.<sup>1</sup>

singularly well fitted for easy expression on tablets of Babylonian clay, and equally suited to rock inscriptions, while the written hand, executed only on a smooth surface, presented no difficulties to any series of curves or complicated lines. In addition to leather<sup>2</sup> and other materials, the ancient Persians, we also learn, wrote upon *Tāb* (Birch-bark). The Indians, we know, adapted this substance to the same uses,<sup>3</sup> and possibly the Indian Vedas are indebted for their preservation to this very material; whether its employment was limited to the population whose dialects were expressed in the Arian character we have no means of saying, but in all probability, if the Northern Indian races knew of its use, the Magadhis would not have remained long deprived of it, or some suitable substitute; that they also wrote with ink is amply established by the discovery of letters so written on the relic caskets at Sanchi.<sup>4</sup>

Since the *à vue* was written, I have met with a most apposite illustration of the justice of my opening remark, in the obverse of a Babylonian clay-tablet—now in the British Museum—of about 600 a.c., which is impressed with cuneiform characters on the one face, and inscribed with Phœnician letters on the other. The Babylonian character is not very perfect, but the Phœnician has evidently been difficult to execute, in comparison to the simple lines of the associated inscription; the curves of the letters, and the depth it was necessary to give the lines, to ensure permanence, have clearly puzzled the stile of the artist, whose knowledge of, and aptitude in, the formation of the letters, are otherwise sufficiently apparent. While adverting to these subjects, I would further draw attention to the double system of writing in use in ancient times, as exhibited in the concurrent record of spoils, &c., almost uniformly depicted in the Koukunjik marbles, where the one scribe uses a broad stile with a clay cylinder or hawk-tablet; and the other appears to be writing with a more pointed instrument, on some pillable material.—See Leyard, p. 184, 'Monuments of Nineveh,' pl. 58; as well as Nos. 59 and 15\* British Museum.

To revert, however, to the Indian question, I may remark, in conclusion, that the tradition in Huen Tsang's time, evidently went to the effect, that the early Buddhist scriptures of Kāśyapa's council were written 'sur des feuilles de tige (palmier);' and that, in such form, (i) 'les répandit dans l'Inde entière.'—'Riamaire,' p. 158. Albruni, in speaking of his own experience in the eleventh century, notices the use of paper (پاپر), and the local employment, 'dans le midi de l'Inde,' of the leaves of the *Tāri* (تاری); to which he adds, 'mais dans les provinces du centre et du nord de l'Inde, on employe l'écorce intérieure d'un arbre appelé *houe* (توز). C'est avec l'écorce d'un arbre du même genre qu'on recouvre les arcs: celle-ci se nomme *Moog*' (موج).—'Reinard Mémoire sur l'Inde,' p. 305. Further references are given to 'Arrian,' l. viii, c. ix.; 'Fou-kou-ki,' p. 392, &c.]

<sup>1</sup> [Dr. Weber has instituted certain philological comparisons, in the hope of

<sup>2</sup> Assyria.—P. H. Goss, London, 1832, p. 546.

<sup>3</sup> Hammar Isphāhāni کتاب تاریخ العرب, p. 961, and xxv. 'Libri inventi sunt, in quibus depositæ erant varis eorum disciplinæ, omnes linguis Perſien antiqua scripti in cortice tār.'—See also 'Aytz-i Akbari,' vol. ii., 125.

Maçon in A. A. p. 69 and 84. See also fig. 11, pl. iii. *Ibid.* Maçon continues his remarks on substances used to receive writing: 'In one or two instances I have met with inscriptions; one scratched with a stylus, or sharp-pointed implement around a stonite vase, extracted from a Toge at Darunta; another written in ink, around an earthen vessel, found in a Toge at Hidā; and a third dotted on a brass vessel.'—See also 'Reinard Mémoire sur l'Inde,' p. 396.

<sup>4</sup> 'Jour. Roy. As. Soc.', vol. xiii., p. 116; 'Edinburgh Tepeh,' 299; 'Jour. As. Soc. Beng.', vol. xxiv., p. 294.

This Sanskrit action upon the indigenous form need not be limited to the date at which we are now able to cite extant examples of the Pāli letters; and, as I have claimed for the latter an antiquity very inadequately represented by their use under Asoka, so I may assume an independent process of maturation under the influence of the former language, in written documents, which is not necessarily restricted in its point of departure to the date of the lapidary models of which that monarch has left us examples. Indeed, these very monuments, in their bearing upon each other, already exhibit the early phase of an irregular advance beyond the limitation of the normal letters, in the greater amount of compound consonants to be found in use in the Gīrnār edict, as contrasted with the Dhauī transcript, and the still more simple records of the Eastern pillars, which, in point of time, are absolutely subsequent to the two former inscriptions. And this alone is sufficient to form a justifiable basis for a line of argument I have elsewhere adopted in reply-

being able to determine the initial method of writing in India by the definition of the primary meaning of the words employed to describe the endorsement of the edicts of Asoka. Following out the Greek and Latin analogy of the derivation of the art of writing, implied in the *ypōgō*, 'to groove,' and *scrībō*, 'to scratch,' he contrasts the inflections from the roots **क्षिप** and **क्षिप्**, which occur in the opening passage of these inscriptions: the one signifying 'to smear,' and also 'to write;' the other, he affirms, meaning primarily 'to scratch into,' and, secondarily, 'to write.' Any exclusive induction, however, from these materials is denied to us in the fact that the two words occur in absolute juxtaposition, and almost as if they were convertible terms; there can be no difficulty in admitting that the one root exists with almost a leading meaning for writing in the South (and in Bengal **ক্ষিপ**); while in the north it has retained a nearly exclusive signification for smearing, plastering, etc. The **क्षिप्**, on the other hand, whether its primary intention was to scratch into, or, more probably, to draw a line, holds its position to a much greater extent in the dialects of India as the special indication of writing. However, these comparisons, incomplete and unsatisfactory as they must needs be, are complicated by a doubt as to the original derivation of the word *lipi*. In the Pāli transcripts of Asoka's edicts the orthography is assured; but in the Kāpur di Girī text, in spite of Professor Wilson's most determined conversion of the initial letter, in the numerous instances in which it occurs, the word is palpably and uniformly *dipi* (*dipitana*, *dipitāna*, etc.), which, as Mr. Norris has shown, finds a counterpart in position and meaning in the Persian Cuneiform Inscription ('*Jour. Roy. As. Soc.*', vol. x., p. 247, 250, lines 48, 55 of Tablet); and in the Syriac version it appears as *dipi*, with the same signification (vol. xv., pp. 19, 24, 187). The legitimate Arian *śikhā*, occurs in one passage as the correspondent of the Pāli *śikhā* (Gīrnār, i. 10); but usually the *dip* of the northern alphabet answers to the *śikhā* of the south (iv. 11, v. 6).



ing to those who follow too implicitly Prinsep's first idea of the progress of writing, and who seem

Disposed to admit of but one single element, as liable to affect the march of alphabetical development—that of time. To show how fallacious any notion of a *necessarily* progressive change would be, I may call attention to the very slight modification that is seen to have taken place in the local alphabets of Gujurāt, etc., during several centuries; and I would inquire, if this argument is to hold good, how much of difference ought we to be able to detect between the alphabet of the Vallabhi copper-plates, which they would date in the sixth century A.D.,<sup>1</sup> and the style of writing in use in the Western Cave, which is almost identical with the characters in prevalent use among the Buddhists in the 3rd century B.C. And yet, a reference to the facsimiles in pl. XXVII. will demonstrate how essentially limited the alterations effected by this lapse of ages really were.<sup>2</sup> Prinsep, as we have seen, was prepared—with his usual fairness—to concede that there were other causes likely to influence these alphabetical mutations, though his original idea had clearly been to assign all impulse in this direction to the effect of time. Had he lived to perfect his theory, I doubt not that he would have accepted other agencies as playing an important part in the results to be accounted for—prominent among these would, I think, have to be placed, the advance or retardation due to nationality or other local influences; otherwise it would be difficult indeed to account for the various separate alphabets that we find in all their independent diversity at a later period of Indian progress.<sup>3</sup>

Prinsep's own impression, above repeated, will display how little reliance could

<sup>1</sup> 'Biles Types,' p. 149.

<sup>2</sup> As my readers may be glad to learn what Albernus says on the state of the distributive varieties of writing current in his day, I append M. Reinaud's version of the entire passage:—'On compte plusieurs écritures dans l'Inde. La plus répandue est celle qui porte le nom de *siddha-matras* (सिद्धमत्र) ou substance parfaite; elle est usitée dans le Cachemire et à Benarès, qui sont maintenant les deux principaux foyers scientifiques du pays. On se sert également de cette écriture dans le Madhya-Deça, appelé aussi du nom d'Aryavartha. Dans le Malva, on fait usage d'une écriture appelée *nagari* (नागरी); celle-ci est disposée de la même manière que la première, mais les formes en sont différentes. Une troisième écriture, nommée *ardha-nagari* (अर्धनागरी), c'est-à-dire à moitié nagari, et qui participe des deux premières, est usitée dans le Bhatia (भट्टिया) et dans une partie du Sind. Parmi les autres écritures, on peut citer le *malavry* (मलवारी), usité dans Malascheva (मलेशवा) au midi du Sind, près de la côte; le *bosandiba* (बसन्दिबा), employé à Buhmanva, ville appelée aussi Manowara; le *karnata* (कर्नात), usité dans le Karnate, pays qui donne naissance aux personnes appelées, dans les armées, du nom de *Karnata* (कर्ना); l'*andri*, employé dans l'Andra-Deça ou pays d'Andra (अन्तरदेश); le *dravidi*, usité dans le Dravida ou Dravira; le *lari*, dans le Lar-Deça ou pays de Lar; le *gaura* (गौर), dans le Persh-Deça (पेशदेश) ou région orientale (le Bengale); et le *bikshaka* (बिक्षक) dans le Oudra-Pourahanka (उद्रेणोरहना). La dernière écriture est celle dont se servent les bouddhistes (البد).—M. Reinaud, 'Mémoire sur l'Inde,' p. 298.

be placed on a judgment which did not take this element into consideration, for he assigns, on the mere ground of forms of letters, a higher antiquity to the Gujari copper-plates, than he does to the Gupta inscriptions; whereas, we now know, that the Guptas preceded the Vallabhis!

Had he confined himself to tracing the alphabetical advances made by these different sections of Indian races, instead of comparing two series of literal signs that had been thus far matured by different hands, he would have worked upon surer ground. To support my assertion, I would direct attention to the variation of types of letters to be found on the nearly contemporaneous inscriptions of the Gupta dynasty. If we examine the Allahabad writing,<sup>1</sup> and contrast it with that on the Baitari Lat,<sup>2</sup> we discover considerable difference between the general configurations of the majority of the characters in each—varying from scarcely perceptible modifications to an absolute difference of form in others; for instance, the **ख**, **ग**, **घ**, **प**, and **म** are virtually the same characters in both inscriptions, but their outlines are by no means identical, while the signs **ब**, **ज**, **ड**, and **न** are, so to speak, different letters. To carry out the contrast, let us refer to the Bala<sup>3</sup> inscription. Here again we find a general change in the aspect of the letters and most distinct modification or absolute divergence from the Allahabad type in the following characters—**ख**, **उ**, **य**, **घ**, **प**, **म**, **न**, **र**, **ह**, **श**, **ष**, and **स**.

V. As to the possible influence of the Semitic character of Northern India on the collateral Pāli; I should reduce this to the very minimum under its direct Palaeographic aspect,<sup>4</sup> and should even prefer to advocate the converse proposition. There are here also some singular alphabetical coincidences which, however, had better be reserved for examination under the notes on the Arian character. A point which adds materially to the difficulty of instituting any useful comparisons in regard to this division of the subject is our ignorance of the date of the introduction of the Arian branch of the Semitic tree into the regions south of the Hindú Kush and its extension into the sub-Himalayan belt towards Hastinapur. For, as in the case of the Southern alphabet, its

<sup>1</sup> 'Jour. As. Soc. Beng.' vol. vi., p. 969.—See Translation, vol. i., p. 233.

<sup>2</sup> 'Jour. As. Soc. Beng.' vol. vi., p. 1.—English Version, vol. i., p. 240.

<sup>3</sup> 'Jour. As. Soc. Beng.' vol. vi., p. 453.—Noticed at p. 248.

<sup>4</sup> [I am not at all certain, however, that the Arian alphabet did not contribute the letter **प**, the equivalent of **फ** in its own series, to serve in the Skh inscription as **म**. The original character has, to my perception, more of mechanical coincidence with the general tendency of the Arian formation of letters, than of homogeneity with the alphabet of the South; and it is curious to observe how soon the perpendicular centre stroke of the original became horizontal under local treatment. The proper Indian **ब** = **म**, on the contrary, seems to have been of indigenous adaptation.]

earliest appearance, within our ken, is in the counterpart edict of Asoka at Kapur di Giri in the Peshāwur valley. Two items, however, suggest themselves as important in the general inquiry. (1) The greater amount of pure Sanskrit the Kapur di Giri inscription<sup>1</sup> carries in its text, as illustrating the descending course of that language<sup>2</sup>; and (2) the ultimate and not very long delayed extinction of all trace of the once extensively prevalent Arian character, and its supersession by the more exact and appropriate system of writing indigenous to the south!<sup>3</sup>

<sup>1</sup> [Jour. Roy. As. Soc., vol. xii., p. 256.]

<sup>2</sup> [Prinsep had already noticed this fact in connexion with other data then at his command.—The vernacular language of India at that period, then, varied in different provinces;—it approached more to the Sanskrit in the N.W., etc.—vol. vii., p. 280. The possession of several letters requisite for the due definition of Sanskrit orthography, but unneeded in Pāli writing, is also important.]

<sup>3</sup> [I have usually avoided complicating the simple Palaeographic inquiry—on which alone my data entitle me to speak—with any reference to the important light philology must be expected to throw upon the general question. I depart from my rule in this instance, in citing the original and highly valuable remarks of the author of the 'Dravidian Grammar,'\* regarding the existing state and probable early course of certain Indian languages. Mr. Caldwell's position may be stated in his own words:—'That the Dravidian languages are to be affiliated, not with the Indo-European, but with the Scythian group of tongues; and that the Scythian family to which they appear to be most closely allied is the Finnish or Ugric.'\* [The scope of the term Dravidian is defined by the author as follows.] 'The idioms which are included in this work under the general term 'Dravidian' constitute the vernacular speech of the great majority of the inhabitants of Southern India. With the exception of Orissa and those districts of Western India, and the Dekkan, in which the Gujarāṭhi and the Marāṭhi are spoken, the whole of the peninsular portion of India, from the Vindhya mountains and the river Nerbudda (Narmadā) to Cape Comorin, is peopled, and from the earliest period appears to have been peopled, by different branches of one and the same race, speaking different dialects of one and the same language—the language to which the term 'Dravidian' is here applied; and scattered offshoots from the same stem may be traced still farther north as far as the Rajmahal hills, and even as far as the mountain fastnesses of Beluchistan. The Gujarāṭhi, the Marāṭhi (with its offshoot the Konkani), and the Uriya, or the language of Orissa, idioms which are derived in the main from the decomposition of the Sanskrit, form the vernacular speech of the Hindū population within their respective limits: besides which, and besides the Dravidian languages, various idioms which cannot be termed indigenous or vernacular are spoken or occasionally used by particular classes resident in Peninsular India.'

\*The idioms which I designate as 'Dravidian' are nine in number, exclusive of the Rajmahal, the Uriya, and the Brahui. They are as follows: 1, Tamil;

\* 'A comparative Grammar of the Dravidian or South Indian Family of Languages, by the Rev. H. Caldwell, B.A. London, Harrison, 1856.'

\* Cf. also Nutt's Scythian text of the inscriptions at Behistun.—Jour. Roy. As. Soc., vol. xv.

\* The discovery of this Dravidian element in a language spoken beyond the Indus proves that the Dravidians, like the Aryans, the Græco-Scythians, and the Turco-Mongolians, entered India by the North-Western route.—p. 23.

In this indeterminate state, I am content, for the present, to leave the general question of the progressive development of the writing of India proper; being convinced, that no uniform or absolute law can be enunciated applicable to the varied circumstances of the whole circle of the palaeography of the

2, Telugu; 3, Canarese; 4, Malayalam; 5, Tulu—[the remaining four are] entirely uncultivated, destitute of written characters, and comparatively little known—6, Toda or Todara; 7, Kota; 8, Goud or Gouda; 9, Khond or Kund, or, more properly, the Ku. The proportionable numbers of the several races by whom the languages and dialects mentioned above are spoken appear to be as follows:

1	10,000,000	} 22,150,000
2	14,000,000	
3	5,000,000	
4	2,500,000	
5	100,000	
6 to 9	500,000	

‘Whilst I regard the grammatical structure and prevailing characteristics of the Dravidian idiom as Scythian, I claim for them a position in the Scythian group which is independent of its other members, as a distinct family or genus, or, at least, as a distinct subgenus of tongue. They belong not to the Turkish family, or to the Ugrian, or to the Mongolian, or to the Tungusian, . . . but to the group or class in which all these families are comprised. On the whole, the Dravidian languages may be regarded as most nearly allied to the Finnish or Ugrian family, with special affinities, as it appears, to the Ostiak.’—p. 45.

The conclusions arrived at with regard to the Northern Indian languages are summed up thus—‘It is admitted that before the arrival of the Aryans, or Sanskrit speaking colony of Brahmins, Kshatriyas, and Vaishyas, the greater part of Northern India was peopled by rude aboriginal tribes, called by Sanskrit writers Mlechhas, Dasas, Nishadas, &c.; and it is the received opinion that these aboriginal tribes were of Scythian, or, at least, of non-Aryan origin. On the eruption of the Aryans, it would naturally happen that the copious and expressive Sanskrit of the conquering race would almost overwhelm the vocabulary of the rude Scythian tongue which was spoken by the aboriginal tribes. Nevertheless, as the grammatical structure of the Scythian tongue possesses peculiar stability and persistency; and as the pre-Aryan tribes, who were probably more numerous than the Aryans, were not annihilated, but only reduced to a dependent position, and eventually, in most instances, incorporated in the Aryan community, the large Sanskrit addition which the Scythian vernaculars received would not necessarily alter their essential structure, or deprive them of the power of influencing and assimilating the speech of the conquering race. According to this theory, the grammatical structure of the spoken idioms of Northern India was from the first, and always continued to be, in the main, Scythian; and the change which took place when Sanskrit acquired the predominance, as the Aryans gradually extended their conquests and their colonies, was rather a change of vocabulary than of grammar,—a change not so much in the arrangement and vital spirit as in the material of the language. This hypothesis seems to have the merit of accord better than any other with existing phenomena. Seeing that the Northern vernaculars possess, with the words of the Sanskrit, a grammatical structure which in the main appears to be Scythian, it seems more correct to represent these languages as having a Scythian basis, with a large and almost overwhelming Sanskrit addition, than as having a Sanskrit basis, with a small admixture of a Scythian element.’—p. 38.

‘The Scythian substratum of the North-Indian idioms presents a greater number of points of agreement with the Oriental Turkish, or with that Scythian tongue or family of tongues of which the new Persian has been modified, than with any of the Dravidian languages.’—p. 39.

multifarious languages and nationalities embraced amid the indigenous or intrusive races, who in succession may have peopled portions of that land.

I now insert the type Table of transitions of the Indian Alphabet referred to at page 41. This, like Prinsep's lithographed synopsis, requires but little introductory notice, as it should be sufficiently explanatory in itself, but it may be necessary to mention, that I have modified some of the headings of the earlier alphabets, which I have felt bound to retain unaltered in the artist's copy of Prinsep's original fac-similes.<sup>1</sup>

The derivations of the six leading or epochal series of the general table may ordinarily be gathered from the notices and translations of the original texts of each, inserted in various parts of this publication.<sup>2</sup>

The so-entitled Nerbudda character is taken from a set of copper-plate grants, of uncertain date, found at Seonl in the Saugor and Nerbudda territories;<sup>3</sup> and the Kistna alphabet,

<sup>1</sup> [As the accompanying Table of Alphabets has lately appeared, under a slightly varied form, in the work of another author, it is necessary for me to explain how it comes to be inserted in this place without the usual acknowledgment. My Publisher, in making his preparations for the present reprint, imported, at my request, from Germany, such of the Sanskrit types, based upon Prinsep's originals, as were deemed requisite for the illustration of the Palaeographic history of Indian writing. As some difficulties presented themselves, on the arrival of this foreign type, in regard to its justification and assimilation with our own, it was determined to set up the entire table before it was required in the order of the consecutive articles. This was done, and the first rough proof had been submitted to me, when Mr. Austin's managing superintendent intimated that if I had no objection he intended to lend the table for publication in Mr. Monier Williams' Sanskrit Grammar. I of course assented willingly to this arrangement, merely stipulating, in the most distinct manner, for the due acknowledgment of the derivation. I heard nothing further on the subject till the work in question appeared, under the auspices of the Oxford University Press, when I naturally looked for the expected recognition of the use of my materials. However, to my surprise, I could discover no notice whatever of obligations to my publisher or myself. Upon making inquiries, I discovered that there had been some misapprehension as to the terms under which these materials had been permitted to be used; and Mr. Williams assures me that he was not in any way made aware of my interest or concern in the synopsis, and therefore necessarily failed to acknowledge the merely secondary title I claim in its reproduction.]

<sup>2</sup> [No. 1, vol. ii. p. 8, et seq. of this publication; No. 2, 'Jour. As. Soc. Beng.', vol. vi., p. 1042; see also Stevenson, 'Bombay Journal,' July, 1862, and January, 1864; No. 3, Art. xix. *infra*; No. 4, vol. i., p. 232; No. 5, vol. i., p. 252; No. 6, vol. i., p. 321.]

<sup>3</sup> [See p. 726 'Jour. As. Soc. Beng.' vol. v. (1836), and also Prof. Wilson on 'Chattisgarh Inscriptions,' 'Asiatic Researches,' vol. xv., p. 507.]

TRANSITIONS

OF THE

INDIAN ALPHABET,

FROM THE TIME OF ASOKA,

WITH SOME OF THE MOST MARKED LOCAL VARIETIES

AT PRESENT IN USE.



# THE CHINESE DICTIONARY

1. The Chinese Dictionary is a book which contains the names of things in Chinese and English.

2. It is a book which contains the names of things in Chinese and English.

3. It is a book which contains the names of things in Chinese and English.

4. It is a book which contains the names of things in Chinese and English.

5. It is a book which contains the names of things in Chinese and English.

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28. It is a book which contains the names of things in Chinese and English.

29. It is a book which contains the names of things in Chinese and English.

30. It is a book which contains the names of things in Chinese and English.

# V O W E L S

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ASOKA'S  
EDICTS.  
(3rd Cent. B.C.)

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WESTERN  
CAVES.

ॠ ॡ ॢ ॣ । ॥ ७ ८ २

SAH  
INSCRIPTION.  
(Girnar.)

ॠ ॡ ॢ ॣ । ॥ ७ ८ २ ३ ४ ५ ६

GUPTA  
INSCRIPTION.  
(Allahabad.)

ॠ ॡ ॢ ॣ । ॥ ७ ८ २ ३ ४ ५ ६

VALABHI  
PLATES.  
(Girnar.)

ॠ ॡ ॢ ॣ । ॥ ७ ८ २ ३ ४ ५ ६

KUTILA  
INSCRIPTION.  
(3rd Cent. A.D.  
(Basra).)

ॠ ॡ ॢ ॣ । ॥ ७ ८ २ ३ ४ ५ ६

KERUDDA.

ॠ ॡ ॢ ॣ । ॥ ७ ८ २

KISTNA.

ॠ ॡ ॢ ॣ । ॥ ७ ८ २

TELINGA.  
(Madrasi.)

ॠ ॡ ॢ ॣ । ॥ ७ ८ २ ३ ४ ५ ६

TIBETAN.  
(Hibernia.)

ॠ ॡ ॢ ॣ । ॥ ७ ८ २ ३ ४ ५ ६

SQUARE PALI.

ॠ ॡ ॢ ॣ । ॥ ७ ८ २ ३ ४ ५ ६

GUJARATI.

ॠ ॡ ॢ ॣ । ॥ ७ ८ २ ३ ४ ५ ६

PUNJABI.

ॠ ॡ ॢ ॣ । ॥ ७ ८ २ ३ ४ ५ ६

KASHMIRI.

ॠ ॡ ॢ ॣ । ॥ ७ ८ २ ३ ४ ५ ६

BENGALI.

ॠ ॡ ॢ ॣ । ॥ ७ ८ २ ३ ४ ५ ६

DEVANAGARI.

ॠ ॡ ॢ ॣ । ॥ ७ ८ २ ३ ४ ५ ६

which follows, was obtained from inscriptions at Amarāvati in Berār.<sup>1</sup>

For the more modern alphabets, which are arranged irrespective of their relative antiquity, I have had to rely upon such

<sup>1</sup> [Prinsep explains the source from whence he derived the materials for this alphabet in the following remarks (—) 'In the library of the Asiatic Society are ten manuscript volumes of drawings of sculpture, images, architecture, and inscriptions, forming part of the celebrated collection of the late Colonel Mackenzie. The greater portion of these are as yet unknown and undescribed. Some of the series, as far as we can ascertain, have been published, nor are we aware of any attempt having been made to decipher the inscriptions. It is greatly to be wished that the whole of these interesting documents could be digested in some convenient arrangement and made accessible to the learned world, especially now that the invention of lithography offers a cheap and expeditious means of effecting such an object. We were in hopes of combining their publication in the form of a volume or two of plates, with the digest of the Mackenzie manuscripts, which, at the recommendation of the Society, the Government has lately entrusted to the Rev. W. Taylor at Madras, the author of 'Oriental Historical Manuscripts.' As a specimen of the contents of these curious volumes, Captain Cunningham has kindly favored me with the two lithographs numbered as pls. x. and xi., vol. vi., 'Jour. As. Soc. Beng.' He has selected the two longest inscriptions from the volume, No. 18, entitled 'Antiquities at Amaravati,' a town in the Berār province, situated on the Kistna river to the west of Nāgari.

'The majority of the sculptures of Amaravati seem to belong to a magnificent *stūpa*, or Buddhist shrine; but there is an admixture towards the end of the volume of objects of the Hindu worship. An accurate map of the town is prefixed, whence it appears that the ruined *stūpa*, whence the relics are taken, was on a mound of 100 feet diameter, now converted into a tank. It is called Dipadimma (translated by Colonel Mackenzie 'the mound of lights'), which so resembles the name of a similar place of Buddhist celebrity in Ceylon (Dambodhinna), that we imagined, on seeing the inscription from the east side of the gateway, some mistake must have been committed; for on comparing the characters with pl. xxviii. of the 'Jour. As. Soc. Beng.', vol. v., p. 444, their perfect identity with the Ceylonese type of old Nāgari was manifest: indeed the three initial letters appear to form the same word 'maṇḍa' . . . and the same combination there recognized as 'Maṇḍaḍa' . . . drew Captain Cunningham's attention while copying the penultimate line of the present inscription.

'The second inscription, occupying the two sides of pl. xi., 'Jour. As. Soc. Beng.', vol. vi. [the Kistna alphabet], is altogether of a different class, although the book states it to have been procured from the same town, Amaravati.

'The character has much resemblance to that of some of the cave inscriptions at Mahābalipur and other places to the westward; the essential portion of each letter also assimilates very closely to the alphabets of the Chettigarh and Sōmi inscriptions, and this has served as the key by which I have effected the transcription of the whole.

'It is worthy of remark, that in this alphabet, which we may aptly denominate the Andhra character, from its locality, may be traced the gradual transition from the more simple Devanagari of Northern India (No. 2 of Allahabad, Gays and Gujrat) to the complicated or florid writing of the Southern Peninsula. On comparing it with the Hala Kanara, or ancient Karnatic, the letters *a*, *i*, *y*, *r*, *l*, *śā*, *śh*, *dā*, *śā*, which may be regarded in some degree as root letters, because they have undergone more variation than others in the modern writing of different provinces, are nearly identical. There is also an incipient loop in the lower line of many of the letters which becomes afterwards more developed in the west and south. The Telugu or Telugu character is one step further removed from springs directly from the Hala Kanara, and retains many of the Andhra letters still unaltered, particularly the *dā*



type as chanced to be available, amid which may be found some isolated forms that might stand but indifferently the test of local criticism.—E.T.]

and *ṣā*. In the accompanying plate (*Jour. As. Soc. Beng.*, vol. vi. pl. xii) we have thought it worth while to exhibit these resemblances, and point out the peculiarities noted, that no means may be neglected of facilitating the examination of other inscriptions that may link on naturally at either end of this fragment of the chain of our Indian palaeography.



## XIX.—EXAMINATION OF THE SÁH INSCRIPTION FROM GIRNÁR IN GUJARÁT.

SANSKRIT INSCRIPTION, No. 1, FROM JUNAGARH.

[ I insert Jas. Prinsep's translation of the Sáh inscription at Gírnár as it originally appeared in the '*Jour. As. Soc. Bengal*'—notwithstanding that it has to a certain extent been superseded in the acquisition of more perfect copies of the monumental writing than he was constrained to rely upon—in order both to complete the record of his contributions to an important section of Indian Numismatics, and to serve as a needful introduction to his notes in illustration of the subject, which retain, with but limited exceptions, their pristine value!—E. T.]

After the announcement made in the proceedings of the Society, that the Governor-General has acceded to my request, for the deputation of an officer to take exact fac-similes of the several inscriptions in Gujarát, which have turned out to be of so important a nature, it may seem premature or superfluous to continue the publication of the analysis of the less perfect document now in my hands. But it is only in a few uncertain passages that the expected corrections are desired. The body of the matter is sufficiently intelligible, both in the Páli edicts of Gírnár, lately published, and in the Sanskrit inscription from Junagarh, which I have chosen for the subject of my present notice.

I should, indeed, be doing an injustice to Capt. Laing, who executed the cloth facsimile for the President of the Bombay Literary Society, and to Dr. Wilson himself, who so graciously placed it at my disposal, when, doubtless, he might with little trouble have succeeded himself in interpreting it much better than I can do, from his well-known proficiency in the Sanskrit language; it would, I say, be an injustice to them were I to withhold the publication of what is already prepared for the press, which may be looked upon as their property and their discovery, and to mix it with what may hereafter be obtained by a more accurate survey of the spot.

Before, however, proceeding to the inscription itself, I insert Dr. Wilson's account of the site.

<sup>1</sup>The rock containing the inscriptions, it should be observed, is about a mile to the eastward of Junâgadh, and about four miles from the base of Gîrnâr, which is in the same direction. It marks, I should think, the extremity of the *Maryâdâ* of the sacred mountain. The Jains, as the successors of the Bauddhâs, greatly honour it.<sup>2</sup>

The rock or large stone above alluded to, appears to contain all three inscriptions. On the eastern side facing the Gîrnâr hill are the edicts of Asoka in the old character; on the western side, the Sanskrit inscription which I have selected as my theme for the present occasion; and on the southern side a third inscription, longer even than either of the others, but somewhat more modern, and less distinct.

The western inscription, then, is near the top of the stone;—it covers a surface of ten feet and a half in breadth, by five feet in height. The stone is a good deal cut or worn away in two places, but it does not seem that anything has been lost on the outer edges, the



irregularities there visible proceeding from the contour of the stone. Capt. Laing's facsimile is lithographed on a very reduced scale in the 'Jour. As. Soc. Beng.,' vol. vii., pl. xv.

The character is only one remove from the Buddhist alphabet of Girnār. It has the same mode of applying the vowel marks *e*, *a*, and *o*, in particular to those excellent test letters, *a*, *ṇ*, and *m*. The vowel *i* is still formed of the three dots; but I need not more fully dilate upon its peculiarities, since I have already inserted the whole alphabet, as No. 3 of the comparative table [Pls. xxxviii., xxxix.] A few, also, of the principal passages are now subjoined on a larger scale in pl. xix., 'Jour. As. Soc. Beng.,' vol. vii., as upon them rests the value with which this inscription will, doubtless, be regarded in Europe as well as in India, on account of the historical information it is calculated to afford.

Once transcribed into modern Nāgari a Sanskrit inscription becomes easily intelligible through the aid of a skilful pandit. In the present instance, it has only been necessary to change two or three dubious letters to enable Kamalākānta to explain to me the contents of all the continuous passages which still exist on the stone, and it is fortunately not very difficult to imagine from the context what must have occupied most of the spaces now eroded or mutilated.

TRANSLATION OF THE GIRNĀR BRIDGE INSCRIPTION (APRIL, 1838).

(Be it) accomplished!<sup>1</sup> This very impossible bank at the foot of the hill city (Girnāgar<sup>2</sup>). . . . . (15 syllables) with wide expansion and with great

<sup>1</sup> The same invocation, *siddhase*, is used in the Skandagupta inscription, pl. i.

<sup>2</sup> The vowels of the word Girnāgar are wanting, but the name cannot be mistaken, being modern Girnār.

depth of strong masonry,<sup>1</sup> carried all along the bottom of the said hill, filling up the interstices or irregularities in even layers, up to the height of the bank . . . . . (39) . . . . . by a chosen (architect?) the foundations of the bridge being completed most substantially, by embanking off in various ways the water . . . . . (59) . . . . . by workmen cheered on by kindness, and with a vast abundance of materials, was in progress. Then the work continued under favor of the Rājā Mahākshatrapa (the great patron of the warrior class), who was named Swāmi Chastana, . . . . . (and was completed) in the seventy-second year of his son, the Kshatrapa, mindful of the lessons of his instructors, the rājā named Aridīma,<sup>2</sup> in the dark half of the month of Mārgaśīrṣa . . . . . (afterwards) by an immense foundation, brought on by heavy rains, converting the whole surface of the earth into an ocean, and making a mass of mud of the hill of Urjayata (?)— . . . . by the tempestuous waves of the Palastai river, and its several tributaries, the bridge . . . . . (was carried away. Subsequently) . . . . . in conformity with the original design, (it was) repaired with blocks of stone from the hill, remedying the difficulties of the passage way with numerous long beams and trees laid across,—and skilfully uniting them . . . . . (A second time) by the force of the waves, in a fierce hurricane and flood, (it was) broken down and much damaged, . . . . . (after which), with stones and trees and piles,<sup>3</sup> and massive beams<sup>4</sup> stretched across, it was again put into complete repair, with an indestructible embankment, having a length of 490 cubits, and in like manner having a breadth of 75 cubits, in a wonderful manner raising out all the water, and laying dry the bed of the river<sup>5</sup> . . . . . by Pūyā Gupta, the territorial treasurer of Rājā Chandragupta Maurya, (this) was caused to be done: and by the Yavana rājā of Asoka Maurya, (named) Tushapa, it was ornamented with service and parapet, and with an artificial canal visible there, over which the bridge also extended, in a manner worthy of the approval of the rājā. . . . . (Afterwards) by him, who, being protected from the winds to the unceasing and increasing possession of the fortunes of royalty, was invited by all classes waiting upon him for the security of their property—to be their king:—who, from clear intelligence, has not suffered the marishes of animal life:—who is faithful to his promises—who is courteous in speech—who in battle, opposed face to face with an equal antagonist, and threatening to discharge his weapons, compassionates his yielding foe . . . . . who gives hope to those of their own creed repairing to him to beseech for succour . . . . . preserving the ancient customs of the town unin-

<sup>1</sup> सन्धि बन्धि, the joining or cementation of masonry, is now called by a similar name *jandi*. I suppose the piers or foundations to be intended.

<sup>2</sup> नागरिदास (sic)—if this is correctly traced, it contains a grammatical error, in the substitution of *र* for *ः* after *न*. The name might be read *Nāri*; or *Nāga*, were the preceding word *नाग*. The date may be read either *varsha dvicāpātita* (or) followed by *ānanta*,—or *Arīḥamaśaśta dvicāpātita* *ānanta*, in the 72nd year after the death of Aridīma. As there is a space after *Arī*, *ānanta* may be also supplied, making the date 278.

<sup>3</sup> अनुत्पत्तारथ, the introduction of *Ananta* here is hardly intelligible, perhaps we should read *anantaśat sūri sūraṇa sūtraṇa vāhaṇa*—the remover of the impediments to the flow of the current from the beams and materials that had fallen into the river.

<sup>4</sup> गुह्यवता—the distinction of *poles* and *latter* in the modern wood market is, that the former are unsquared, and the latter, squared timbers.

<sup>5</sup> I have given to this obscure passage the best sense in which I think it explicable, as the breadth, 75 cubits, could hardly have been that of the bridge itself.

fringed by the proud and insolent;—who is lord of the countries<sup>1</sup> of Avanti, Anupa (?) Vrija, Anarita, Sarashtra . . . . . Savara, Kukāra, Kīrāta, Tishat, and others, all conquered by his own might, and maintained in their former prosperity, and all their inhabitants, both high and low, converted into obedient subjects—all these countries, under his majesty (forming one empire), and furnishing every object of desire and gratification: who is the powerful leader of an army obeying him fondly as one born with the title of a renowned hero;—who, after more than one conquest of Śākarni, the king of Dakshinapatha, by merely a threat (of attack), concluded a peace (with him) for the security and protection of his country . . . . . and again set up his royal banner;—who has a natural taste for exercising and improving the strength of his hand, according to the rules<sup>2</sup>;—who is renowned for his skill in the practice of all the elaborated sciences, of grammar, of polity, of singing, of expedients (mechanics?) and the rest, the theory of which he has gone through, and tolerably retained;—who, powerful in horses, elephants, chariots, oxen, weapons, and armour . . . . . exceedingly clever in breaking down the strongholds<sup>3</sup> of his enemies;—who is every day happy in the bestowal of alms and mercy;—who is affable in manners;—whose treasury is abundantly filled with gold, silver, tin, and the lapis lazuli jewel, brought as tokens of his greatness, offered to him as his just and proper measure of tribute; who (understands) the precise etiquette of (courtly terms), their sense, measure, sweetness, rarity . . . . . who is of correct bodily proportion, excellent in gait, color, vigour, and strength, &c.; in form and limbs of most auspicious aspect;—who, of his own (macht?), has the title of ‘patron of warriors and king of men’;—who is crowned with the garland<sup>4</sup> of flowers won in the Swayamvara ceremony (or tournament);—by this great patron of the warriors (or Satrap) Indira Dānak . . . . . zealous for the increase of his religious fame, and in kindness and compassion for females, and the lame and sick . . . . . and with a most liberal expenditure from his own treasury (for the people?);—consenting at once to the petition of the chief citizens;—the construction of this bridge with threefold strength, . . . . . after due inspection, was ordered to be done;—thus . . .

By the dignified in virtue, the chief minister of the great Satrap . . . . . the road was also lined with trees, rendering pleasure (to the passers by).

Further, by him who, out of favor to the inhabitants of town and country, restored with substantial repairs the excellent condition (of the bridge) to the good subjects of this metropolis,—who made it impregnable to the torrents of water . . . . . by the descendant of the Pahlavan tribe, Marjya, the contractor, who has finished his work precisely on the terms of his estimates and plans, so as to give

<sup>1</sup> Most of the countries enumerated here are to be found in the Purānas. Avanti is well known as Ujjain; Vrija is the country about Mathura; Anarita is mentioned with Comboja, Sindhu, and Yavana Mārgana (‘As. Res.’ viii. 339, 341), and is therefore probably in the Panjab;—Kukāra is enumerated in the same list with Benares; Savara is called a wild tribe in the south-east. There are three Kīrātas named—two (Chandra and Rajya) in the north-east, and one in the south (pp. 339-41) Tishat may perhaps be read Toshali in Katak, of which more hereafter.

<sup>2</sup> By inadvertence, I have omitted the repetition of the word *ayita* अयितार्जित at the beginning of the 13th line in the lithograph.

<sup>3</sup> Reading *परवलाय*, but the text may be read *बलवध* making it ‘destroying his enemy’s force,’ or again it may be *परवलायवेसीष्टयक्रियेन*, well skilled in diminishing the power of his enemies. (The Nagari transcript has been altered thus.)

<sup>4</sup> In former times, Hindū ascetics show their favourite among a band of suitors by throwing a garland over his neck. A play on the name *Dānak* is intended.

satisfaction,—the strong man and overcomer of difficulties, surrounded by his overseers (*gattis*),—by him, the establisher of religious fame, and the increaser of the glory of his master, was this work executed."<sup>1</sup>

## OBSERVATIONS.

I have already remarked, that in this inscription, for the first time, we find the name of the great Chandra Gupta, the contemporary of Alexander, recorded on a genuine monument of antiquity. There can be no doubt of his identity, because his family name Maurya is added; and further, the name of his grandson, the no less famous Asoka, immediately follows, designated also by the same family cognomen of Maurya.

On first discovering this important fact, and perusing the mutilated fragment with Kamalākānta pandit, as well as we could make it out, I thought myself in possession of a record of the time at least of Asoka, by whose deputy or viceroy the bridge seemed to have been completed. The long string of complimentary epithets which fill up the bulk of the inscription being in the instrumental case, and thus agreeing with the *Yavana rājena* of the upper sentence.

This turns out not to be precisely the case. A considerable period is embraced in the history of the Girnār bridge, partly anterior and partly subsequent to the time of Chandra Gupta;—thus it seems originally to have been erected by a Prince named Swāmi Chashtāna, a name rather Persian than Indian;—it was then either repaired

<sup>1</sup> *Annakthitum* अवस्थितं, accomplished. The same word is used at the foot of the Allahābād inscription—(vol. vi. 278). But I knew not how it there eluded the apprehension of the pandit who made me write in lieu of it अवस्थितं 'remaining firm or fixed.'

or more probably completed by his son Aridāmā or Atri-dāmā in the month of *Mārgasīrsha* or *Agrahayana*, in the year 72, but the letters which follow are unfortunately illegible, and we are left in the dark as to the era then in use for recording events.

The bridge was then totally destroyed by an inundation of the river Paleshini, a name I cannot discover in the map of Gujarāt. Thus temporarily repaired, perhaps by the inhabitants, it was again carried away; and a more thorough reparation was commenced under orders from Chandra Gupta Maurya, by his prefect of the province, Pappya Gupta, and completed in the reign of Asoka, his grandson, thirty or forty years afterwards, by his Greek officer, for so I think we may understand *Yavana rāja*. The brahmanical population of the distant province of Surāshtra probably had but little affection for the Buddhist monarch, who is not even honoured in the inscription with the title of *rāja*, being simply styled Asoka the Maurya! The name of his Greek employé is not very plain on the cloth; it may be read तुषस्तेन—‘by *Tushaspa*,’ a name evidently of Persian termination, like *Gushtasp*, *Lohrasp*, etc., from *asp*, ‘a horse’ (Sans. *asva*). Were the name written *Tushasva*, we might have supposed it a translation of the Greek name Philippos, having precisely the same meaning; and we might have argued that some adventurer having, from his military prowess, obtained service under Asoka, had added those new provinces to his empire, which we find noticed in his religious edicts, and had at length usurped a considerable share of power to himself; being, in fact, the very *Yona rāja* whom the Muhammadan historians state to have

dispossessed Sinsar Chand's grandson. But I am sensible that I have been frequently guilty of running ahead of prudence with my deductions, and I must consequently draw in a little; for it may be possible, after all, that the word *yavana* does not exist. It is preceded by the letter न, which I have rendered नु, 'further,' 'too;' but the expletive is somewhat out of place, and some may prefer the reading अशोकस्य तीयवनराजिन, 'by Asoka's rāja (or lord) of the floods and forests.'

To continue my history of the bridge:—after the last repairs, although no accident is mentioned, we must conclude that such had occurred, and that the bridge was rebuilt by the prince upon whom the largest share of the eulogistic inscription is lavished. The opening passage may perhaps be recoverable on a careful re-examination of the stone. Towards the close, it does indeed mention that on the petition of the inhabitants (backed by female influence?) he strengthened the structure three-fold at his own expense. Now the name of this prince is Rudradāma, destined, it says, from his cradle to be elected to the throne,—his title is Rāja Mahā Kshatrapa, the same as that of Aridāma and Śwāmi Chashtān. We may therefore view him as a scion of the old dynasty, replaced on the throne after a temporary subjugation of the province by the Maurya sovereigns of India proper.

It is curious, and most interesting to those whose attention is engaged in the subject, to observe how different ancient monuments throw light upon one another, and help to their mutual development. The name of Rudradāma recalls to our memory the series of Surashtra coins



described in my journal hardly a year ago. Among the eleven names there distinguished, Rudradāma was conspicuous as following just such a break in the line as would be made by the cause above alluded to. Again, the title then read as Mahā Kritima, the elected king, on second examination agrees precisely with the present more palpably developed Mahā Kshātrapa. On referring to the plate of Mr. Steuart's coins, sent to me by Capt. Harkness, I find that I so read the word at first, and noted it in pencil, but gave it up on the pandit's ignorance of such having ever been a title in use. Had I possessed at that time a comparative alphabet to consult, I should immediately have perceived that the right hand twist at the foot of the *k* did not *then* denote as it does now the vowel *ri*, which was formerly turned in the contrary sense; but that it was the cerebral *śh* subjoined to the *k* (forming *kśh*), exactly as it occurs on the Junagarh<sup>1</sup> inscription. The *p* also deceived me, being more pointed than the same letter in the word *putra*; but on examination of the coins in my possession, I find it generally rounded off as U, and never crossed below as the *m*.

The word **क्षत्रपः** *kshatrapas*, although wholly unknown as a sovereign title to modern Hindūs, and not to be found in their books, is familiar to the reader of the Grecian history of ancient Persia, with merely a softening of the initial letter, as **σατραπης** *Satrapa*, the prefect of a province under the Persian system of government. I do not believe that the etymology of this name has ever

<sup>1</sup> I have before remarked that this town seems called after the Greek prince, *Yavanagada*.

been traced. It is called a Persian title, but the Persian dictionaries only contain ستراب *Satrab*, as an obsolete term for the governor of a province, without explanation of its origin. In Sanskrit it signifies the ruler, feeder, or patron of the *kshatra* or military class; and now that we know the ancient language of Persia east of the Euphrates to have been a near dialect of the Sanskrit, we may conclude that Satrapa had the same signification in Ariana. It is not for me in this place to speculate on the purport of the term in the Persian polity, but it is a fact well known that the effeminate Persians at a very early period were in the habit of governing their numerous tributary provinces by mercenary troops. The same system, and the same denomination of Satrap, was adopted and retained by the Macedonian conqueror, both when Greek and native officers were employed: and instances are frequent enough of the Satraps assuming to themselves independence and a regal title.

The Satrapies of the ancient Persian monarchy are not supposed to have extended across the Indus. If, in Alexander's time, this limit was first transgressed, it was not long before the Bactrian Greeks, or the Parthians, made themselves masters of Sindb, Katch, and Gujarāt.<sup>1</sup> The present inscription may incline the learned to conclude that Suráshtra was before then one of the Satrapies of the empire, from the name of Chastan, the Satrap, who is stated to have first erected the bridge, and who must have preceded Chandragupta. Rudra, Viswa, and others of the list are more Indian in sound. It is remarkable

<sup>1</sup> See 'Jour. As. Soc. Beng.' vol. vi., p. 385, for Vincent's authority on this subject.

that in the long string of epithets applied even to Rudradámá, the chosen Satrap, there is none which bears the slightest allusion to Hindú mythology; while, on the other hand, the coins of the whole dynasty bear an emblem which we have hitherto considered either of Mithraic or of Buddhist import. The name Jinadámá (wearing Buddha as a necklace) is decidedly Buddhistic; and the epithet applied in the inscription to Rudradámá, — 'who, from right persuasion, never put any living creature to death,' — proves that Rudra's opinions were at any rate influenced by the proximity of the important Buddhist establishment at Gernár.

The style of prose eulogy employed by the composer of the inscription puts us much in mind of our old friend, the Allahábád column. It has its corresponding list of countries conquered and equitably ruled; but few of the names are, as might be expected, the same in the two. Avanti or Ujjayani, and Vrija (if the latter name be correctly read) are of the most importance as implying that the elected kings of the Sáh family, or the Satraps of Suráshtra, as we may now more properly call them, had acquired dominion over all the central portion of India, driving back the Magadha sovereigns (who had previously spread their hands to the farthest west), into their own Gangetic limits. The other places, Anartta, Kukura, etc., are probably provinces to the northwest, out of India proper. One other name, however, deserves our particular attention, the king of the Dakhan (Dakshinapatha), who was twice threatened with an invasion, and brought to sue for peace. His name is Sátakarni, the same which occurs several times in the lists of the

Andhra kings extracted by Wilford from the Bhāgavat and other Purānas. It is a patronymic, from शतकर्णि, 'the hundred eared,' which was, doubtless, the name of the founder of the family; and Sātakarni was probably the surname of all the line, though not repeated everywhere in the versified enumeration of the Purānas.

The locality of the Andhra dominion has hitherto been as uncertain as the period of its sway. Wilford says in one place that the Andhra princes 'made a most conspicuous figure on the banks of the Ganges for above 800 years;' again, that Andhra and Koshala (near Kalinga) are used synonymously by some Hindū authors: again, that Śrī Carna-deva took the title of king of Tri-kalinga, or of the three shores, to the east and west and south of India.<sup>1</sup> From our inscription we perceive that the general term of Dakshinapatha agrees well with the latter definition, and we may rest content with denoting the Sātakarnis as kings of the Peninsula.

Further, as to their age, we find one of the name contemporary with Rudradāma who followed Asoka (we cannot say at what precise distance). Wilford brings them much lower down, from the third to the sixth century after Christ, in order to square the last of their name, Pulomarchi, or Puliman, with the Pulomien<sup>2</sup> of the Chinese.

He is forced to confess, however, that there were Andhras at the beginning of the Christian era, when, says Pliny, 'the Andaræ kings were very powerful in

<sup>1</sup> *Asiatic Researches*, vol. ix. p. 101.

<sup>2</sup> *Ibid.* p. 104.

<sup>3</sup> Quere. Is not Brahman written with this orthography in Chinese?

India, having no less than thirty fortified cities, an army of 100,000 men and 1000 elephants.<sup>1</sup>

We must, therefore, consent to throw back the Andhras; and, instead of requiring them to fall into a general and single line of paramount Indian kings, as Wilford would insist, let them run in a parallel line, along with the lines of Suráshtra, Ujjain, Magadha, and others, individuals of each line in turn obtaining by their talent, prowess, or good fortune, a temporary ascendancy over their neighbours: thus at length we may hope to fulfil Capt. Tod's prophecy,—<sup>2</sup> let us master the characters on the columns of Indrapreshta, Prayag, and Mewar, on the rocks of Junagarh, at Bijollie on the Aravulli, and in the Jain temples scattered over India, and then we shall be able to arrive at just and satisfactory conclusions (in regard to Indian history)."<sup>2</sup>

[Prof. H. H. Wilson has most obligingly favored me with the subjoined revised translation of the interesting monumental record which forms the subject of the preceding remarks. The text upon which the interpretation is based is derived from an independent Devanágari transcript of the original, I had prepared with much care from the improved fac-simile of Messrs. Westergaard and Jacob, published in the Journal of the Bombay Branch Roy. As. Soc. for April, 1842. Prof. Wilson has of course referred to the amended lithographed transcript of this

<sup>1</sup> The name Śāragan, given in the Periplus as of a sovereign that had formerly reigned at Kalliana (near Bombay), has some resemblance to Śātakarni; but I will not build upon such uncertain ground.

<sup>2</sup> Tod's 'Rājasthán,' l. 46: he gives a curious derivation, by the way, of the name of Junagarh:—"The 'ancient city,' *par excellence*, is the only name this old capital, at the foot of, and guarding, the sacred mount Girnār, is known by. Abul Fazl says it had long remained desolate and unknown, and was discovered by mere accident. Tradition even being silent, they give it the emphatic name of *Juna*, 'old,' *garā*, 'fortress.' I have little doubt that it is the Asildurga or Asilgarh of the Grabhile annals, where it is said that prince Asil raised a fortress, called after him, near to Girnār, by the consent of the Dabi prince, his uncle."

writing, and verified my doubtful readings. His Sanskrit text and commentaries will be reserved for separate publication, in the 'Jour. Roy. As. Soc.' The matured result is all that I need desire to present to my readers.—E. T.]

REVISED TRANSLATION OF THE SĀH INSCRIPTION ON THE GIRINĀG ROCK.

(1). This perfect, delightful, beautiful (causeway?) from Girinagar to the foot of . . . . . (was constructed) of . . . . . stone (and in) breadth, length, and height, was firmly built as a public road . . . . . along the skirt of the mountain . . . . . Emulous<sup>1</sup> . . . . . formed . . . . .

(2). . . . . by that artificial causeway, and still renowned.

(3 and 4). . . . . remains in a great heap . . . then this . . . in the year two (and) seventy (?) of the royal Mahāshatrapa<sup>2</sup> Rudra Daman, whose name is reputed by the venerable, the son of the royal Mahāshatrapa, of well selected name, Svami Chandana.<sup>3</sup>

(5). In the dark half of Marga Śukla, the earth was converted as it were into a sea, by heavily raining Panjanya, so that the golden sand of the mountain (was washed away?).

(6). And by the exceeding violent currents of the Pāṇini, and other rivers, destroying, as if at the end of the world, all that sought an asylum, even on the highest parts of the hill, as well as along the skirt, and bringing down the trees from the peak, the causeway (was broken down?).

(7). And this being accompanied by a terrible strong wind, the water rushed down like a cataract, sweeping away the stones, trees, shrubs, creepers, along the river, by (whose joint efforts) four hundred cubits (were thrown down). . . . .

(8). And seventy cubits (more) broken by the torrent . . . . . was caused to be made by Puṣyagupta, the chief artificer<sup>4</sup> of the Maurya King Chandragupta, by Tishasayana, the Yavana rāja . . . . . of Asoka, the Maurya, through good fortune was adorned<sup>5</sup> . . . . . through that restoration, the rāja (announced) to all castes having come to see the causeway, for their security, that by him discontinuance was made of putting men to death, by expelling the breath of life.

(10). By observing this engagement, he (overcame all enemies, and extended his rule) over many well affected countries, conquered by his prowess.

(11). Both in the east and west, as . . . . . avanti . . . . . Anarta Surashtra . . . . . kukura Aparāṇṭha, and all the nishadā.

(12). Having repeatedly overcome Śātakarni, the lord of the South, he concluded an alliance (with him?).

<sup>1</sup> Apparently alluding to the Śubhandha of Rama, to which that of Girinagar is compared.

<sup>2</sup> Rājā Mahāshatrapa may also mean 'the great Satrap of the King.'

<sup>3</sup> But there is room left, by defects in the inscription, for one or more names between Rudra Daman and Svami Chandana.

<sup>4</sup> The words are Śakṣi Yagyayana, possibly for Śreṣṭhiya Gagyana, or the last may be intended for Guptana, as if there was a Śaṣṭigupta after Chandragupta.

<sup>5</sup> The inscription records the repair of the causeway by Rudra Dama. Here, apparently, it relates its having been built by some officer, or by the successor of Chandragupta; and repaired or beautified by the Yavana rāja (?) in the time of Asoka.



As an atonement for leading my readers into this long digression, I now present them with an engraved plate of all the varieties of the Suráshtra group of coins yet found. There is one new name added through the diligence of Lieut. E. Conolly. The rest are already known; but I subjoin their corrected readings for the satisfaction of my numismatical friends. The fact of their having a Grecian legend and head on the obverse is now explained, and the date of their fabrication is determined so far that we may place some of the early reigns in the second and third centuries before Christ: to what later period they descend we may also hope to ascertain through the means of other coins which will come to be described along with the third inscription from Junagarh, as soon as we obtain a correct facsimile of it. I may here so far satisfy curiosity, as to state that this third inscription,—the longest, and in some respects the best preserved, though from the smallness and rudeness of the letters it is very difficult to decipher,—is in a more modern character, that allotted to the third century after Christ, or the Gupta alphabet; and that in the opening lines I find an allusion to Skanda Gupta, one of the Gupta family, whose name has also been found upon a new series of the Suráshtra coins. The words are ... कीर्ति विगुण वृपतिः स्कन्दगुप्तः पुष्यकीः चतुर..... (Vide 'Jour. As. Soc. Beng.,' vol. vii., pl. xix., and vol. i. *ante*, p. 247).

We shall thus be able to string together by means of the inscriptions and coins of ancient Suráshtra a continued series of names and *dates* from the time of the Maurya dynasty to that of the Gupta dynasty of Kanauj, which terminates the catalogues of the Purānas.

*Dates*, too, did I say? Yes, I am in hopes of adding even actual dates to the series, for I have been fortunate enough to light upon a clue to the ancient forms of the Sanskrit numerals, and to discover their presence on the very series of Suráshtrian coins to which I have been just alluding. But here again I must solicit a little patience while I describe the grounds of this new assertion.

#### ON THE ANCIENT SANSKRIT NUMERALS.

The most ancient mode of denoting number in the Sanskrit languages, as in the Greek and Latin, was by the use of letters in alphabetical order. This system we find prevalent in all ancient Sanskrit works, as well as in the Páli, the Tibetan, and other derivate systems. There do not, indeed, appear to be any numerals peculiar to the Páli. In their sacred records the words are always written at length; they have also the symbolical words of the Sanskrit astronomical works, and what is called the *Varna sankhya*, or numeral classification of the alphabet. The numerals now employed in Ceylon, Ava, Cambodia, Siam, have hardly the slightest affinity to one another.

When this system was exchanged for that of the decimal or cipher notation does not appear to be known, or to have been investigated by the learned. Up to the ninth or tenth century of our era, the Nágari numerals extant on numerous monuments do not differ materially from those now in use.

In the Gupta class of inscriptions, as far as I know, no numerals had as yet been found until I noticed

some doubtful and unknown symbols on the Bhilsa monument. In the Buddhist pillar inscriptions the dates where they occurred were uniformly expressed at full length.

A few months ago I was engaged in transcribing and reading with my pandit some copper-plate grants supposed to be of the third century, found in Gujarát by Dr. Burn, whose beautiful copies of them I hope shortly to make public. In one of these, the date was entered at full in the words संवत्सरे शततृयेचतुर्विंशत्तमि दि 'in the *samvat* year three hundred and ninety-four.' A few lines below this the word **संवत्सर** again occurred, followed by three symbols,<sup>1</sup> *d*, *m*, *f*, which must, of course, be numerals: they are more exactly copied in pl. xl, and, according to the preceding statement, should be 394.

On a second plate in the same manner, the date in words was संवत्सर शत त्रयोविंशत्तमि कार्तिक शुद्धपक्षदश्या, 'in the 15th of Kartik, *samvat* 380,' and in figures सं, *d*, *l*, कार्तिक शु

On a third plate the date in words was शततृयेचतुर्विंशत्तमि कार्तिक पौर्णमासी, 'Kartik full moon, *samvat* 385,' and in figures *d*, *l*, *i*, and *o*, *i*, as before: in both of which the same symbols occur for 1, 3, 8, and 5; and the latter figure, much resembling the ancient letter *na*, but slightly altered, was again observed on a fourth plate sent me by Dr. Burn, from Gujarát, which did not contain the date in words, thus, सं, *d*, *k*, *h*.

<sup>1</sup> [In the original text of the 'Jour. As. Soc. Beng.,' fac-similes of these numerals are inserted in each place; as these are repeated in full in Prinsep's own Plates No. xl. of the present series, and are re-copied and classified in my supplemental Lithograph, pl. xl. a, I have not thought it necessary to have these types re-cut, but have supplied their places by italic letters, whose several correspondents are duly defined in the new transcript of pl. xl. a.]

Much pleased with this new train of discovery, I turned to Mr. Wathen's paper in the fourth volume of the *Journal*, in which I remembered his interpretation of the date on a similar grant by Sri Dhara Sena, as being in the ninth year of the *Valabhi Samvat* of Tod, corresponding with A.D. 328. Here the translator had no written entry to guide him, nor had he any clue whereby to recognize the numerals which followed the abbreviated *Samvat*, thus, *d, c*, which we now perceive to be 300, + some unknown unit. I immediately wrote to Mr. Wathen and to Dr. Burn, requesting them to examine carefully the dates of all other plates in their possession, and from them in return I received all the examples which are inserted in plate xl. From the whole series combined, we may venture to assign a certain value to the 1, the 3, the 4, the 5, the 8, and the 9.

The last of these, I could not but remember as the symbol on one of the Bhilsa inscriptions, which led to so many conjectures a year ago. In the form of  $\oplus$  we have evidently our *m*, or the year 9, but the three strokes at the side would appear to modify its value, or to be themselves a numeral, perhaps the 6. Then, as we find the preceding *k* has not a dot above it, we may use that also as a numeral, and understand the whole *k, m*, as 2 or 6, or 790 according to the value to be hereafter assigned to *k*.

Again, in the second Bhilsa inscription (*Jour. As. Soc. Beng.*, vol. vi., p. 458, pl. xxvi.), the fig. 3, with another, is perceived following the word सम्वत्, and the last letter may possibly be a numeral also. In Mr. Ommanney's Multai inscription, two numerals of the







same class were observed (*Jour. As. Soc. Beng.*, vol. vi., p. 869.)

It may also be remembered that in my notice of the Suráshtra coins (vol. i, p. 433), I remarked behind the head on the obverse, besides a legend in corrupted Greek characters, a few strange marks, not at all like either Greek or Sanskrit alphabetical characters; to these I now re-directed my attention, and was happy to perceive that they too were in fact numerals of the same forms, and of equal variety with those on the copper-plate grants.

I have arranged at the foot of pl. xl. those specimens in my own cabinet, on which the figures are best developed.

Upon bringing the subject to the notice of Dr. Burn, at Kaira, he wrote me that he had already remarked these symbols on another very numerous class of old coins, found in the ruins of the Gujarát towns. They are made of lead or tin; and have on one side, in general, a bull, and, on the other, the triple pyramid which forms the central symbol of the silver hemi-drachmas of the Suráshtra satraps. I have not found space to introduce them into the present plate, but fig. 22, pl. xxxvii. will serve as a representative of the whole class. It is a finely preserved copper coin, most opportunely discovered and presented to me by Lieut. E. Conolly, from Ujein. It bears the numerical symbols *d*, *k*, very distinctly marked under the Chaitya symbol. Among the facsimiles of the leaden coins, I find *d*, *l*, :, and *d*, *m*, :, with barely room for a third figure, but in one the reading is *d*, *j*, *g*, so that we may venture to

place them all in the fourth century of some yet unknown era.

Among the silver coins the variety is greater: fig. 23, which I find by the reverses is a coin of Rudra Sáh, has the year  $d, l, h$ .

Another, fig. 26, also of Rudra Sáh, has the third figure well developed  $d, l, a$ .

Fig. 24, of the son of Rudra Dámá (the repairer of the Girnár bridge), has apparently the numbers,  $d, m, :$ , or 390.

Fig. 12, from Ujein, Rudra Sáh II. has  $d, d, b$ , the first three rather faint. In a coin of Viswa Sáh, given to me by Mr. Wathen, similar to fig. 9, of the plate, the date is  $d, b, g$ .

Fig. 25, is a well brought out date  $d, j, :$ , on a coin of Atri Dámá, son of Rudra Sáh, in my cabinet: the coins of the same prince in Mr. Steuart's plate, and one also of Aga Dámá shew traces of the same second figure.

Now, although the succession of the Satraps, or Sáh family, as given in volume i., p. 429, rests but on slender evidence in some points; still, where the names of father and son are consecutive, we may rest with confidence on it in fixing the priority of such of our newly found numerals as occur on them respectively.

We must, for the sake of perspicuity, repeat the list, with the addition of the dates as far as we have traced them:

#### REGAL SATRAPHS OF SURASHTRA.

- 1 K. Rudra Sáh, son of a private individual, Swámi Jina Dámá.
- 2 K. Aga Dámá, his son.  
(Here the connection is broken.)
- 3 MK. Dámá Sáh (no coins.)

- 4 MK. Vijaya Sáh, son of Dámá Sáh.  
 5 K. Vira Dámá, son of Dámá Sáh.  
 6 MK. Rudra Sáh, son of Vira Dámá, *Samsat*,  $\bar{b}$ , / $\bar{p}$ /  $\bar{l}$ ,  $\bar{a}$ , and  $\bar{d}$ ,  $\bar{a}$ , :.  
 7 K. Viswa Sáh, another son of Vira Dámá ditto  $\bar{d}$ ,  $\bar{b}$ ,  $\bar{g}$ .  
 8 K. Rudra Sáh, son of M.K. Rudra Sáh, ditto  $\bar{d}$ ,  $\bar{d}$ ,  $\bar{b}$ .  
 9 MK. Atri Dámá, son of M. K. Rudra Sáh ditto  $\bar{d}$ ,  $\bar{j}$ , :.  
 10 MK. Viswa Sáh, son of Atri Dámá.  
       (Here the connection is broken.)  
 11 MK. Swámi Rudra Dámá (no coins.)  
 12 MK. Swámi Rudra Sáh, his son, *Samsat*,  $\bar{d}$ ,  $\bar{l}$ ,  $\bar{a}$ , and  $\bar{d}$ ,  $\bar{m}$ , : '.

The two last names being insulated from the rest, were on the former occasion placed by me before Dámá Sáh, because the form of the letter  $\bar{j}$  seemed of the earlier type. Since, then, I have learnt that the turning up of the central stroke of the  $\bar{j}$  constitutes a vowel inflection. I now, therefore, bring the two Swámis to the foot of the list, on the plea that all figures must have precedence of the  $\bar{p}$  or  $\bar{m}$ . In the same manner we may now argue that  $\bar{b}$  precedes  $\bar{d}$ , this figure  $\bar{j}$ , and the latter again  $\bar{l}$ .

To aid in prosecuting my inquiry, I begged Kamalákánta to point out any allusions to the forms of the ancient numerals he might have met with in grammars or other works; but he could produce but very few instances to the point. One of these is to be met with in the *Kātantra Vyākaraṇa*, a work of Belála Sena's time, where the conformation of the four is alluded to in these words,

स्तनं पुनस्ततिश्चतुरङ्गो विसर्गश्च

Like a woman's breast is the figure four, and like the visarga;

and the visarga is further explained by a passage in the *Tantrā-bhīḍhāna*, a more modern work still, dated in 1460 Saka.

विटः स्वाहा नक्षत्रिया उकारिखर्वर्णमाख्यात् विसर्गं

The name of visarga is 'two this,' 'double,' *anulapriya*,—because the visarga has the form of the letter *ph* (O).

This merely alludes to the modern form of the 4, which exactly resembles the Bengali visarga.

The oldest allusion he could furnish, was the following on the form of the 6, from Pingala's 'Prakrit Grammar.'

गुरुवद्धुमत्तो अनीलहोर मुदएक अलो

"The *guru* mark<sup>1</sup> is like the figure 6, crooked, and of two strokes; it is called also *laka* (*laghu*), it is also denoted by one stroke or one minute."

This passage evidently alludes to a form of 6 more resembling the Bengali than the present Nagari type.

Another channel through which I was in hopes of tracing the ancient cyphers, was the numerical system of those Indian alphabets which bear most resemblance to the forms of the earlier centuries, such as those of Kashmir, etc. In the specimens of these, which I have introduced into the plate for the purpose of comparison, it will be seen that the three has certainly considerable affinity to our *d*; while the one and five approach nearly to our *a* and *h*. There is a faint resemblance in others of the group; but some again are totally changed.

The Tibetan numerals (of the seventh century) do not yield much more insight into the matter. They are, we may say, one remove backwards from the Bengali numbers—the 1, 2, 3, and 5, only agreeing better with the Nagari forms. The 1, however, agrees exactly with one of the ancient figures on the coins, and this has been my inducement to consider the latter as 1.

<sup>1</sup> *i. e.* The mark used to denote a short quantity in prosody and in music, which is formed ॐ.

Upon regarding attentively the forms of many of the numerals, one cannot but be led to suppose that the initial letters of the written names were, many of them, adopted as their numerical symbols. Thus, in the Tibetan, 5 ཨ, we see the ཨ or *p* of the same alphabet, the initial of *puncha*. The same may be said of the Kashmirian, and the modern Hindî form ५, and indeed in some measure of the ancient forms *h* and *i*.

Again, the Tibetan 6 ས, resembles the *ch* ས of that alphabet: the Ceylonese form is exactly the *ch* of its alphabet, and there is an equally marked connection between the Nágari ६ and the ६ *chha*, which is the common name of this numeral.

On the same principle, in the absence of other argument, we may set down the ७ of our new series as 7, being identical with ७, the initial of *sapta*.

The modern ३ ३, has no small likeness to the *tr* of the older Nágari alphabets; nor does the २ differ much from *d*; but these resemblances may be more ideal than real; for, by an equally facile process of comparison, they might be both derived from the Arabic figures, as might other members of the series, as 7 and 8, in the Nágari of the Nepalese coins particularly.

The ९ of the Tibetan, Bengálí, Nepalese, and Burmese numerals is precisely the *l* of the ancient alphabets. Now, in the allotment of the vowels numerically, the *li* represents 9; but it would appear far-fetched to adopt one insulated example of derivation from such a source.

The ९, however, of the Suráshtra grants and coins is of a totally different order. It resembles the four-petalled flower of the *bél*, or Indian jasmine; and in the copper

plates we find it absolutely represented with a stalk (see No. 1, of pl. xl). Seeking the name of this flower in Sanskrit, *mallika*, the pandit reminded me that one of its synonymes was *nava mallika*, which the dictionaries derive from *nava*, 'praised, excellent,' but which may now receive a much more natural definition as the 'jasmine flower resembling the figure 9.'<sup>1</sup>

It is further to be remarked that, in many of the ancient systems, separate symbols were used to denote ten, twenty, etc. in combination with the nine units severally. The curious compound figure seemingly used for the 1 of 15 in the two cases quoted above *o* may be of this sort: indeed it somewhat resembles the Ceylonese ten (see plate). On this point, however, I can offer no demonstration, nor any other argument, save that we have already more than nine symbols to find accommodation for as numerals.

With all these helps, and analogies, I have endeavoured to arrange the nine old numerical symbols in their proper order in the accompanying plate, so as also to meet the conditions of the succession of dates on the coins of the satraps of Suráshtra. In this I am far from being confident of having succeeded; but having once, as it were, broken the ice, we may soon hope for a more perfect solution of the curious problem, through the multitude of new, or rather old, monuments which seem to emerge from oblivion just at the time they are wanted, under the united efforts of the Society's associates in central India. Once having proved that it was customary to date the

<sup>1</sup> [Prinsep's usually quick perception seems to have failed him here, as the *Lantia Numera*, in vol. xvi., 'Asiatic Researches,' p. 429, give almost the exact normal forms of 80 and 90, as found in the inscriptions and coin legends.]

coin of that early period, we must direct attention again to the monograms on the Bactrian, Indo-Scythic, and Kanauj coins, which may turn out to be also used numerically.

The numbers, then, which, from comparison with foreign and modern native series, as well as the other considerations above given, I have finally adopted, are as follows:—

1	2	3	4	5	6	7	8	9	10	0
<i>a</i>	<i>b</i>	<i>d</i>	<i>f</i>	<i>h</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>m</i>	<i>o</i>	:
Varieties?		<i>c</i>	<i>e</i>	<i>g</i>	<i>i</i>			<i>n</i>	<i>p</i>	

Before concluding this division of my theme, I may be expected to explain in what era the dates of the Suráshtra coins can be expressed, so as to place Swámi Rudra Dámá, whom we perceive in the inscription to have followed at some reasonable distance Asoka himself, at the end of the fourth century, or about the year 390. If the Vikramáditya or Samvat be here intended, he will fall after the close even of the Arsakian dynasty of Persia, when the Greek was disused, and the arts had greatly deteriorated; when, moreover, the form of the Sanskrit character had undergone considerable change. If we take the Seleucidan epoch, which might have been introduced in the provinces tributary to Syria, Rudra will have reigned in A.D. 89. If, lastly, out of deference to Asoka's temporary supremacy in the Gujarát peninsula, we take the Buddhist era, then 543—390 will leave 153 B.C. about a century after Asoka, and in every respect the period I should like to adopt, were it possible to establish any more certain grounds for its preference. The most perplexing circumstance is that the grants of the



Balabhi dynasty are also dated in the third (or fourth) century, and that it is hardly possible to consider their dominion as contemporary with those of the satraps. For them, indeed, we must adopt the Vikramāditya era, whatever may be determined in regard to the one before us.

[Following out the view of the question suggested by Prinsep's remarks at p. 77, in 1848 I succeeded in demonstrating that these signs were uniformly independent symbolical numerals, each denoting in itself a given number, irrespective of any relative collocation;<sup>1</sup> and, therefore, that the *d* was equivalent to 300, wherever it might be found; and likewise, that the *l* and *m* stood for 80 and 90 respectively, whatever position they might chance to occupy. I then proceeded to distinguish these symbols of the Sâh coin dates that declared themselves severally, units, tens, or hundreds, by their fixed place, in the order of value, which was always fitly maintained, notwithstanding that the figures themselves clearly could not change their signification by any relative re-arrangement. Beyond this, I cannot claim to have advanced the enquiry in any essential degree. The important aid that otherwise might have served me in the sequent classification of the numbers—the test of their recurrence on the coins of the Sâh kings—was altogether wanting, from the fact that the order of succession of those princes was in itself undetermined.

A re-examination of the entire subject was therefore sufficiently called for; and it is possible that the new data, which have lately become available, may contribute materially to solve the general problem of the system under which the ancient Indian scheme of notation was primarily conceived.<sup>2</sup>

<sup>1</sup> [*Jour. Roy. As. Soc.*, vol. xii., p. 23.]

<sup>2</sup> [M. Renand's '*Mémoire sur l'Inde*' was published after the appearance of my Essay in 1835. I therefore transcribe the information contributed by that work towards the general subject. 'Alphrey a remarqué un passage de son *Traité sur l'Inde* aux chiffres employés de son temps, chez les Indiens, avec une valeur de posi-

The most important elucidation that this subject has received since Jas. Prinsep's original discovery, consists in the 'Observations on the dates found in the cave inscriptions at Nasik,' by the Rev. J. Stevenson.<sup>1</sup> Among these records are to be found no less than twenty-eight figures, or combinations of figures, usually appended to the written exposition of the given value defined at length in the body of the text;<sup>2</sup> the lower numbers are suffi-

tion. Ces chiffres sont appelés par nous chiffres Arabes, et les Arabes les nomment chiffres indiens. Alhoryny s'exprime ainsi : Les Indiens, à la différence de nous, ne se servent pas des lettres de leur alphabet pour indiquer des nombres. Mais, de même que l'alphabet varie suivant les provinces, les chiffres changent aussi; les indigènes les nomment *ankas* انكس. Les chiffres dont nous faisons usage sont empruntés à ce que l'on a trouvé de plus convenable chez eux. Du reste, les formes sont indifférentes, pourvu qu'on s'entende de part et d'autre. Dans le Cachemire, on ne se sert pas de traits particuliers pour exprimer les nombres; on a adopté les signes employés par les Chinois. Mais un point sur lequel tous les Indiens sont d'accord, c'est de procéder d'après le système décimal.

M. Reinaud continue : Arrêtons nous un moment sur les paroles d'Alhoryny : Les Indiens, a-t-il dit, ne se servent pas des lettres de leur alphabet pour exprimer des nombres. Il existe un traité sanscrit, composé par Aryabhata, dans les premiers siècles de notre ère, et dans ce traité, comme cela se pratiquait chez les Grecs, les Juifs, et plus tard chez les Arabes, les nombres sont exprimés par les lettres de l'alphabet ayant une valeur numérique. Apparemment, le procédé employé par Aryabhata était tombé en désuétude au temps d'Alhoryny. Néanmoins, les traités scientifiques composés par Brahma-Gupta, au vi<sup>e</sup> siècle de notre ère, et par les écrivains postérieurs, ne supposent pas, en général, l'usage des chiffres; les nombres sont exprimés par des mots susceptibles d'être reliés à une quantité quelconque. Alhoryny ajoute qu'on ne pouvait se livrer à la lecture des traités consacrés à l'astronomie, si l'on ne s'était d'abord rendu un compte exact de cette manière de compter. . . . M. Reinaud sums up his inferences to the following effect, 'Il semblerait résulter de l'emploi des lettres de l'alphabet par Aryabhata, pour exprimer les nombres, que dans les premiers siècles de notre ère, les Indiens mêmes, en employant ces lettres avec une valeur de position, n'avaient pas encore eu l'idée de recourir à des signes particuliers. A l'égard de la méthode mise en usage par Brahma-Gupta, elle s'explique suffisamment, d'un côté par l'habitude ou les indigènes ont été de tout temps de faire mystère de leur savoir; de l'autre, parce que des mots significatifs s'incorporent mieux dans un vers que des chiffres.'

<sup>1</sup> 'Jour. Bombay branch, Roy. As. Soc.', July, 1853, p. 35. 'Jour. As. Soc. Beng.' 1854, Note, p. 407.

<sup>2</sup> I could have desired that the facsimiles of these inscriptions should have been more calculated to command our faith in their exact rendering of the originals, but I observe that Dr. Stevenson himself does not place any great reliance upon the transcripts, as he remarks, 'I trust also to be able to compare all the published copies of the facsimiles with the inscriptions themselves, which, in respect to those at Nasik, I have been unable as yet to do, so as at least to get as perfect a copy of them as can be obtained in the present state of the rocks. As the facsimiles are the property of Government, and executed by another gentleman (Lieut. P. F. Brett), I have done nothing more than, to the best of my ability, see that the lithographer executed his task faithfully.'—Bombay Journal, 1853, p. 57. And again, p. 56, Dr. S. observes,

Voy. un mémoire de feu M. Whish, intitulé, On the alphabetical notation of the Hindus ('Transactions of the Literary Society of Madras,' London, 1827).

ciently simple and obvious, and are only perplexing in the multiplicity of forms some of their exponents are seen to take; the larger sums on the other hand, are expressed by a crude and uncertain method, under which the amount has often to be read backwards in the current line of writing; thus, the generic symbol for *thousands* is ordinarily entered first, that for *hundreds* second, while the specific decimal, or unit cipher, which has to determine the value of the whole, is placed last in the order of alignment, followed by the rest of the inscription. At times again, the mark for *hundreds* is indifferently inserted before or after the figure which indicates the total.<sup>1</sup> If, by any possibility, further argument were required to that end—this double system of arranging the ciphers would alone establish that they were incapable of having their value enhanced or diminished by change of place.

Dr. Stevenson's point of departure, like my own on a previous occasion, was from Jas. Prinsep's investigations of April, 1838 (here reprinted); he does not seem to have seen my paper of 1848, and therefore expresses no opinion either for or against my position, but continues to follow Prinsep in reading ३ as *three*, in preference to *three hundred*; at the same time that he admits that the triple horizontal lines of the normal 3 fully suffice to express the lower number—for which indeed he has a second variant—and notwithstanding that his own materials contribute separate and independent signs for *ten*, *twenty*, *thirty*, and *one hundred*: the latter being specifically distinguished from the various generic signs for *hundreds*.

The next item I have to advert to, is the idea advanced that the Satrap numerals owe their forms to the Bactrian alphabet.<sup>2</sup> This supposition I can scarcely bring myself to entertain.

<sup>1</sup> It is difficult for me at present to say whether the frequent omissions of the point for ॥ and other anomalies, belong to the original, or are the faults of the facsimile.

<sup>2</sup> Naik Inscription, No. 2, plate 7.

<sup>3</sup> Dr. Stevenson remarks, 'In the Satrap inscriptions, the numerals used to express the different sums of money there mentioned are peculiar. At first I could determine nothing about their origin, but on a careful examination I found a strik-

The assumption is chiefly based upon the similarity traced in certain forms of the figures to the original letters of the Arian writing; in order to carry out the comparison however, very great liberties have to be taken with the normal forms of the characters themselves—still very incompletely ascertained—and even these, rather forced identifications, are confined to a very limited proportion of the entire suite of the numbers; while on the other hand many of the figures are clearly and indubitably composed of letters of the identical alphabet in which the inscriptions at large are expressed. That these ciphers in their original constitution actually were indigenous letter symbols seems to be further established by other more recent inscriptions, where such forms are frequently seen to follow the progressive modification of the associate alphabet. I omit the dry details incident to the verification of each symbol, referring my readers to the 'Journal of the As. Soc. Beng.' in which the original paper is to be found.<sup>1</sup>

ing resemblance between the character denoting a thousand (*Sahasra*) and the Bactrian 8 reversed. This induced me to examine the rest of them, and I think it exceedingly probable that they are all derived from that source. The Bactrian *Ta*, pronounced in Sanskrit *T* or *Dak*, will represent well the figure, which is first in 5 or 10 (*Dasha*). The sign for 5 (*Pancha*) is the P, or the old Indian  $\Psi$  inverted. The Bactrian double T also approaches very nearly to the 6 of our inscriptions, as if to denote  $\Psi\bar{\Psi}$ . It would appear, then, that the Bactrian letters had been introduced into the Saurap Indian inscriptions as numerical ciphers. The system, also, is the ancient Roman and Greek one, that in which there are different signs for the 1 in tens, hundreds, and thousands; our present decimal notation being, as I have noticed elsewhere, a comparatively modern invention of the Scindian merchants of the middle ages ('Jour. Roy. As. Soc. Bombay,' vol. ix.) Further research will probably show, as Mr. Prinsep has done with a few of them already, that the old Indian numerals are also ancient letters.—'Jour. Roy. As. Soc. Bombay,' vol. v., p. 39.

<sup>1</sup> The Gupta units vary somewhat from the *Sāh* exemplars, and hence demand a passing notice. As yet I have only been able to discover three definite and complete forms,—the one, which is shaped as an ordinary hyphen, the  $\Psi$  = five, and the curious figure that occurs on coin No. 57, pl. ii., 'Jour. Roy. As. Soc.' vol. xii., which in its outline follows the design of an alphabetical  $\Psi$ . But, in treating of Gupta numbers, I must fairly warn my readers of a preliminary difficulty that I have experienced in regard to the correct point from whence their exponents should be viewed. The Nasik inscriptions display the symbol for one hundred written perpendicularly; and if that be the correct direction of the cipher in the general alignment, the Gupta dates running in front of the profile of the King ought to be read Mongol fashion, like the parallel names of the monarchs of the Gupta race, as usually expressed on the field of their gold currency. On the silver pieces of the Kumāra Gupta, however, whether the sign for 100 may be reversed or not, the arrangement of the tens and units clearly demonstrates that the whole must be read as consecutive rather than as superposed figures, while, strange to say, the dates on the Skanda Gupta

In conclusion, I sum up the results of the present state of the enquiry by the exhibition of the lithographed plate of figures [xl. a] regarding which I have merely to add, that the second compartment includes all such symbols, whether lapidary, numismatic or graven on metal, that I am generally prepared to recognise. The third column reproduces Prinsep's primary conjectural arrangement of the ciphers and their supposed variants. The remaining spaces are filled in with the products of Dr. Stevenson's investigations, but I must warn my readers, that I have taken a double liberty with that author's materials; on the one hand, I have copied my examples of each cipher from the transcripts of the original facsimiles of Lieut. Brett, which are lithographed at large in the Bombay Journal, in preference to following the outlines entered in the companion table of numbers given in that Journal, and supposed to be compiled from the same sources,

On the other hand I have ventured to insert, subject to correction, two signs for 2, which Dr. Stevenson does not definitively acknowledge in his list; but which I obtain from his rendering of inscription No. vi.<sup>1</sup> The third figure for *hundreds*, under the Satrap heading, is also of my introduction, under similar authority.—E.T.]

#### EXPLANATION OF PLATE XII.

Fig. 1, (from Stuart's plates), a silver hemidrachma.

Fig. 11, a coin belonging to Mulla Feroz of Bombay.

Fig. 13, a coin found by Capt. Prescott at Palhanpur in Gujara't, presented to me by Mr. Wathen.

These three coins have all the same legend, but No. 11 exhibits the application of the vowel *i* in two places, which the others want: the legend thus completed is,

*Rājā Kshatrapasa Rudra Sāhā, Svāmī Jina Dāmodratana.*

<sup>1</sup> Of the Royal Satrap, Rudra Sāh, the son of the lord Jina Dāmā.

and Buddha Gupta coins seem to necessitate a supposition of a contrary mode of distribution. I have entered the outlines of the Gupta numerals, both tens and units, in accordance with this somewhat arbitrary arrangement, leaving the point fairly open to correction, when more numerous and more perfect specimens of this coinage may decisively instruct us on the general question.

<sup>1</sup> 'Jour. Roy. As. Soc. of Bombay,' vol. v. p. 53.

The title of Jina Dāmā, ' votary of Buddha,' is a better reading than Jina Dāmā, ' subduer of that sect, formerly adopted. [My No. 11].

Fig. 2, (from Stuart's plates), a coin of Aga Dāmā, son of Rudra Śāh. [No. 10].

*Rājā Kshatrapasa Aga Dāmā, rājā Kshatrapasa Rudra Śāha putrasa.*

Fig. 3, (ditto), a coin of Vijaya Śāh, son of Dāmā Śāh. [No. 9].

*Rājā Kshatrapasa Vijaya Śāha, rājā mahā Kshatrapasa Dāmā Śāha putrasa.*

Fig. 4, (ditto), a coin of Vira Dāmā, son of Dāmā Śāh. [No. 7].

*Rājā Kshatrapasa Virādīna, rājā mahā Kshatrapasa Dāmā Śāha putrasa.*

Fig. 5, (ditto), a coin of Rudra Śāh, son of Vira Dāmā. [No. 13].

*Rājā mahā Kshatrapasa Rudra Śāha, rājā Kshatrapasa Virādīna putrasa.*

Another coin, apparently of this Rudra, in my possession, fig. 26, has a date which may be read 283; I find I have two coins of this prince (one given me by Mr. F. Steinforth). Colonel Stacy has also two of the same; they may be known by the epithet mahā.

Fig. 6, (ditto), a coin of Viśva Śāh, son of Rudra Śāh. [No. 4].

*Rājā Kshatrapasa Viśva Śāha, rājā mahā Kshatrapasa Rudra Śāha putrasa.*

Fig. 7, (ditto), a coin of Atri Dāmā, another son of Rudra Śāh; behind the head, but more distinctly in my own coin (fig. 25), is the date 360? [No. 2].

*Rājā mahā Kshatrapasa Atri dāmā, rājā mahā Kshatrapasa Rudra Śāha putrasa.*

This name is the nearest approach to the Ari Dāmā of the inscription, who, however, was the son of Swāmī Chastāna. Colonel Stacy has also a coin of Atri Dāmā.

Fig. 8, (ditto), of the same prince, introduced as showing more clearly the name of his father.

*Rājā Kshatrapasa Atri . . . . . trapasa Rudra Śāha putrasa.*

Fig. 9, a coin of Viśva Śāh, son of Bhatri Dāmā. [No. 5].

*Rājā Kshatrapasa Viśva Śāha, rājā mahā Kshatrapasa Atri Dāmā putrasa.*

This coin has a date, which may be read 323, in which case it must precede the last two: the father's name was before read as Atri Dāmā, whence the misplacement.

Fig. 10, a coin of Swāmī Rudra, son of Swāmī Rudra Dāmā, in the obverse, the figures 39 (perhaps 390). Another has 385. [No. 12].

*Rājā mahā Kshatrapasa Swāmī Rudra Śāha, rājā mahā Kshatrapasa Swāmī Rudra Dāmā putrasa.*

Fig. 12, a new name, or new as to the second title; Rudra Śāh, son of the great Satrap Rudra Dāmā, was presented to me by Lieut. E. Conolly, from Ujein.

*Rājā Kshatrapasa Rudra Śāha rājā mahā Kshatrapasa Rudra Dāmā (1) Śāha putrasa.*

This is the only coin which bears the name of the repairer of the bridge, and that rather dubiously, as the father of the prince who



coined the piece. It has a date on the obverse, which I have interpreted 390, like the preceding.

Fig. 15, a silver coin belonging to Mulla Feroz of Bombay, similar to Mr. Stuart's coin, fig. 3. [No. 9].

*Rajna mahā Kshatrapasa Vyasa Sahasa, rājna mahā Kshatrapasa Dānd Saha putrasa.*

fig. 14, a copper coin, unique, discovered by Lieut. Conolly at Ujein, and placed in my cabinet through his kindness. Obverse, a bull, with a marginal legend, apparently Greek, some of the letters seeming to form the word *Basileus*, etc.

*Rajna mahā Kshatrapa/* . . . the remainder of the legend lost.

The letters are larger and better formed on this than on the silver coins. Most copper coins of the series exactly resemble the silver ones with a head on the obverse. Col. Stacy has a good specimen, of which the obverse (fig. 27) has apparently a date.

[It is now time that I should advert to the epoch of the Śākya kings and the position in which the somewhat difficult question involved at present stands. Prinsep's opinions are reproduced above in their entirety. In continuation of these researches, I myself attempted, some years ago,<sup>1</sup> to determine more precisely the period to which the rule of this dynasty should properly be ascribed; and I selected on that occasion, as the era best calculated, in general coincidences, for the due explanation of the figured dates extant on the coins, the cycle of Śrī Harsha; a system of computation at that time only recently made known to us under the authority of Albīrūnī, whose work has already been largely referred to in these pages. In arriving at this determination, I did not neglect to consider the claims of other eras whose initial dates promised in any way to accord with the requisitions of the various historical and numismatic evidences derivable from independent sources. Notwithstanding certain leading recommendations that offered themselves in favor of the Buddhist era, I saw cause to reject unconditionally all idea of its title to rule the recorded registers.<sup>2</sup> The Seleucidan era was also tested

<sup>1</sup> [‘*Jour. Roy. As. Soc.*,’ vol. xii., p. 1 (1848).]

<sup>2</sup> [My present conclusion is that the date of the death of Śākya was never generally used in ancient times either for civil or religious computations, otherwise it would be hard to account for the impossibility of fixing its correct epoch, even in the



in its more obvious applicability to the local or epochal demands; and though many arguments were seen to be suggested in support of its selection, which have since been even strengthened by fresh combinations,<sup>1</sup> I am constrained to declare—apart from the slightest desire to adhere to first impressions—that I still give the preference to the *Sri Harsha* era!

Albiruni's account of this cycle will be found quoted at large, p. 166, 'Useful Tables'; and though it will be seen that he himself confesses to doubts and difficulties in regard to its origin and true initial date, I am, for the moment, content to take the fact that some such scheme of chronological admeasurement, reckoning from an event proximate to 457 B.C. or 400 before Vikramaditya,<sup>2</sup> was actually once in use in India, and that the memory thereof, whether distinct and definite, or jumbled and perverted, remained current in the land till the 11th century A.D.

We are not yet in a condition to discuss exact annual or

days of Huen Tsang, who, in his own words, shows how important, and yet how difficult of determination, this point was held to be among the Buddhist communities of India when he journeyed amongst them.]

<sup>1</sup> [I allude prominently to the admission of Greek supremacy, which, it will be seen, I have admitted more definitely since I last wrote on the subject,—though the abnegation of the employment of dates on the Bactrian coins, from whose types the Śāh money was copied, detracts somewhat from the value of the inference. One of the previous obstacles to the admission of the dependence of the Śāh kings, was the doubt respecting the absolute import of the term *सहस्र*, suggested by Prof. Wilson, who remarked, '*Ariana Antiqua*,' p. 295, '*Kabstrapa* admits etymologically of its being explained chief or protector of the *Kakatriya*, or martial race, and may possibly be the origin of the Persian title *Satrap*, as Prinsep supposes, although there is some incompatibility in the assignment of the titles of *Raja* and *Satrap* to the same individual.' On reconsideration, I do not quite admit the force of the latter reason, and the identification of the *सहस्र*, as the titular equivalent of the Greek *ΣΑΤΡΑΠΗΣ*, seems now to be set at rest by the recurrence of the term in the Bactrian Pāli as *𑀲𑀸𑀓𑀭𑀢𑀺* (Inscriptions, vol. I., pp. 95-106, Bactrian coins *infra*); and in Indian Pāli as *𑀲𑀸𑀓𑀭𑀢𑀺*, pl. xlv., fig. 14.]

<sup>2</sup> [Major Cunningham has originated a speculative date of 477 B.C. as 'the era of the Nirvana of Sakya Sinha, not as established in 543 B.C., but as generally believed in by the early Buddhists for a period of several centuries.' This scheme is based on the fact of Asoka's conversion to Buddhism falling 218 years after the Nirvana, the former being fixed from other sources at 259 B.C.; hence the Nirvana itself is assigned to B.C. 477 (259 + 218). A subordinate section of the argument is grounded upon Kanishkas having 'flourished' an even 400 years after the Nirvana, and yet Major Cunningham, in the same page, while objecting to my inferences, mildly remarks—'The difference of exactly 400 years between the dates of Sri Harsha and of Vikramaditya is, to say the least, very suspicious.'—*Jour. As. Soc. Beng.*, vol. vii. of 1854, p. 704.]

monthly dates; an approach to the truth is all we need be concerned with for the time being; for, while the arguments *pro* and *con* extend to questions of centuries, we can afford to leave a very open margin for discretional modifications among the units and tens. I do not propose to recapitulate at any length my original speculations in regard to the correct epochal position of the Sâh kings, but it is needful that I should notice any confirmation my opinions may since have received, as well as any flaws, real or imaginary, that may have been detected by others in my reasoning or inferences.

Amongst other questions that arose during the course of my examination of the materials then available for the illustration of the history of these administrators, was that of their partial or complete independence; and it will be seen that though the balance of evidence appeared to favor the latter supposition as regarded the later members of the dynasty, yet that I reserved a full option for the recognition of the subjection of the earlier rulers of the line to Greek supremacy.<sup>1</sup>

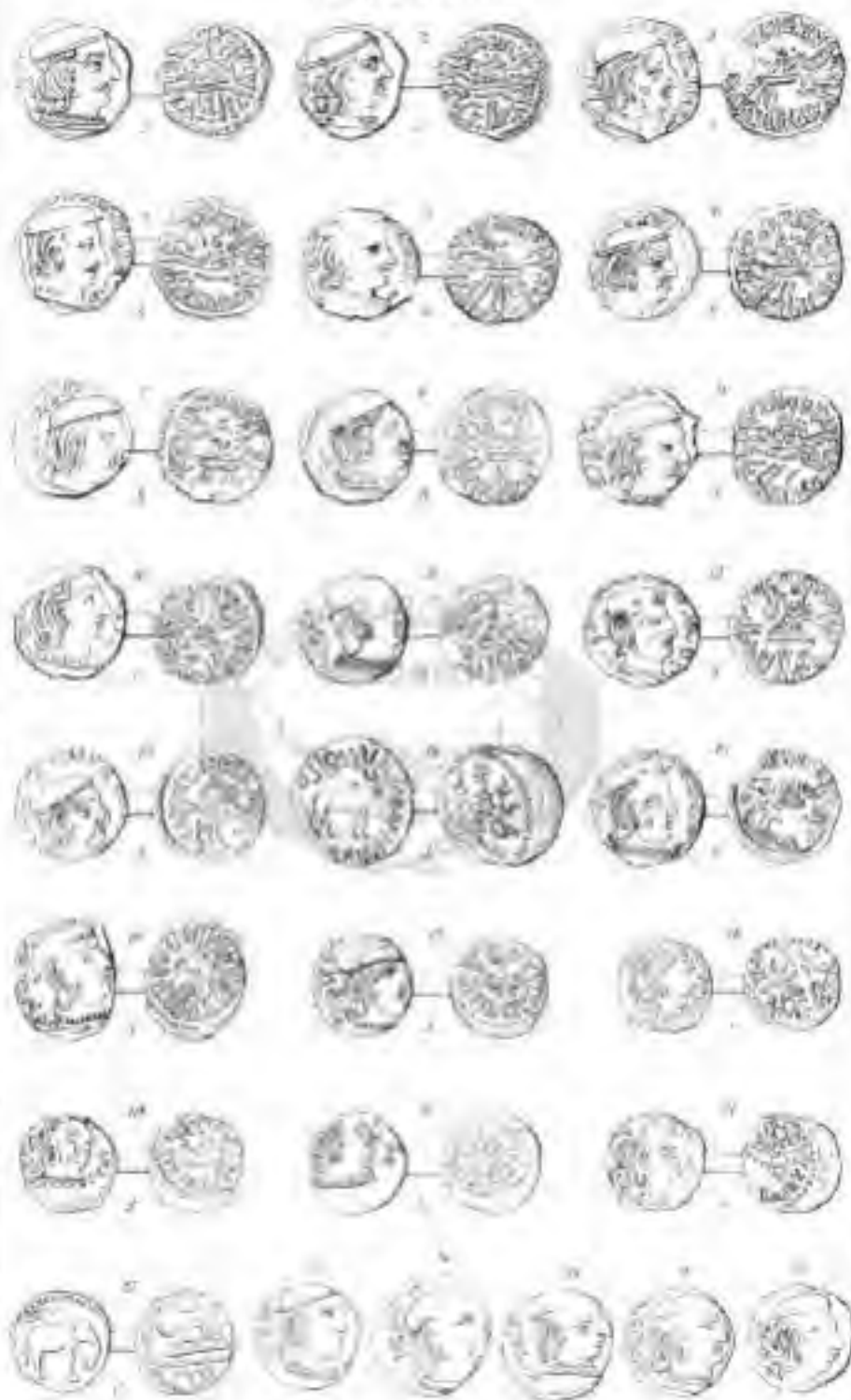
In addition to this, in the detail of the coins themselves, while speaking of the obverse legend on a coin of Rudra Sâh, son of Jiwa Dâmak, as 'a possible corruption of ΔΙΟΝΥΣΙΟΥ,' I added, 'there is a king of this name among the Bactrian Greeks, made known to us by his coins, which, in their types, seem to connect him with Apollodotus.'<sup>2</sup> This notion has been improved upon by Prof. Lassen to an extent that I am scarcely prepared to follow him in. His theory seems to be, that Iśwara Datta was invested with the office of Satrap about the commencement of the 4th century of the era made use of on the coins (*i.e.* circa 157 a.c.), and that, about this time, Apollodotus must have been king; hence it is inferred that he was the Suzerain who raised Iśwara to his local honours. It is further added, 'Dionysios, whose name appears sufficiently clear on

<sup>1</sup> [*Jour. Roy. As. Soc.*, vol. xii., pp. 29, 32, 45, 46.]

<sup>2</sup> [*Jour. Roy. As. Soc.*, vol. xii., p. 52. See also Catalogue *infra*; Dionysius Hemidrachma, No. 1.]



## Saurashtra Coins







Rudra Sinha's money, reigned *circa* 113 B.C.<sup>1</sup> And, finally, the Professor imagines he detects the imperfect orthography of the name of Hippostratus on the obverse of the coins of Rudra Sinha III.<sup>2</sup> Suffice it to say, that the author, so far from contesting my dates or their attribution, introduces us unintentionally to a new feature regarding them, in a purpose their originators could but little have contemplated—a rectification, by their means, of the epoch of the Greek Soverains, under whose auspices the coins are supposed to have been issued.

I next pass to Major Cunningham's review of the Sāh period; and, as he contests my inferences, I permit him to state his case, in some detail, in his own way:—

'3rd. The independence of the native princes of Gujrat between 157 and 87 B.C. is completely at variance with the Greek accounts of Menander's conquest of Saronotus or Sarishtra, between 160 and 134 B.C., which is further authenticated by the long protracted currency of his coins at Barygaza or Baruch.

'4th. The alphabetical characters of the Sarishtran coins are so widely different from those of the Pillar and Rock Inscriptions, and, at the same time, are so much similar to those of the Guptas, that it is impossible not to conclude that there must have been a long interval between Asoka and the independent Sāh kings, and an almost immediate succession of the Sāh kings by the Guptas.

'5th. The author of the Periplus of the Erythraean sea, who lived between 117 and 180 A.D., states that ancient drachmas of Apollodotus and of Menander were then current at Barygaza (Hudson, 'Gang. Mus.', i. 37); this prolonged currency of the Greek drachmas points directly to the period of the Indo-Scythian rule; for though we have some hundreds of their gold coins, and many thousands of their copper coins, yet only one solitary specimen of their silver coinage has yet been discovered. [A mistake: the coin is copper-plated over; see *infra*, Catalogue, under Kadphises]. The Indo-Grecian silver probably continued current until after 225 A.D. when the Indo-Scythian power began to decline. From this period, about 250 A.D., I would date the independence of the Sāh kings, and the issue of their silver coinage, which was a direct copy in weight, and partly in type, from the Philopater drachmas of Apollodotus.—'Philos. Topics,' p. 149.

In regard to the criticism in paragraph 3, I have only to observe that, had I exclusively argued for the absolute and continuous independence of the Sāh kings of Gujarāt, the objections therein advanced might be held to be fairly stated. But even Major Cunningham's own date of 160-130 B.C., if admitted, need not interfere with the concession of a subsequent assertion

<sup>1</sup> ['Indische Alterthumskunde,' vol. ii., p. 794.]

<sup>2</sup> [Rudra Sāh, son of Rudra Sāh. (My No. 5, p. 71, *infra*.)]



of independence on the part of the local governors; and the concluding argument, though the author seems indisposed to allow it, has been refuted in anticipation by Vincent's observations,<sup>1</sup> to which I had given every prominence in my paper which formed the subject of Major Cunningham's comment: had the author printed or even noticed the gist of my argument on the opposite side, and then replied to it, I should have been anxious to have treated his reasoning with more respect than I am able to accord to a mere reiteration of a fact which bears, at the best, an alternative interpretation.

With reference to the ratiocination embodied in the fourth paragraph, I may remark that I have already replied to the chief points involved;<sup>2</sup> but as Major Cunningham and myself differ so completely in our fundamental tests of the progress of writing, and as I am therefore equally unprepared to accept his estimates of similitudes, it would be a sheer waste of time my arguing up from minor details, or attempting to reconcile them, when I have other and less fallacious means of arriving at a judgment.

In respect to the data and inferences embodied in the fifth paragraph, I would simply quote Major Cunningham's own words in regard to the general question between us—'We agree as to the facts, but differ in our deductions.'<sup>3</sup>

My original proposition for the emplacement of the Sâhs contemplated the inclusion of all their dated coins within the fourth century of the Sri Harsha era, and inferentially confined the thirteen kings, whose numismatic testimonies had thus supplied us with epochal records, between B.C. 157 and 57. Among other pure and avowed speculations, which the open nature of

<sup>1</sup> [ 'That the coins of these princes should pass current at Barugaza is no more uncommon than that the Venetian sequin and the imperial dollar should be at this day current in Arabia, or that the Spanish piastre should pass in every part of India and the East; that is, round the world, from Mexico to Manilla, and in some instances, perhaps, from Manilla to Mexico again.'—Vincent, 'Commerce, etc.' ii. 294.]

<sup>2</sup> [ 'Journ. As. Soc. Beng.' vol. xiv. (1855), p. 80; also 'Journ. Roy. As. Soc.' vol. xii., p. 25.]

<sup>3</sup> [ 'Bhîm Topes,' p. 145.]

the question and the absence of positive information to a certain extent invited, I was led to remark, in referring to the well-ascertained average of the length of Indian reigns, that the thirteen accessions in question 'should, under ordinary circumstances, be represented by a sum of more than two centuries instead of being compressed into less than one;' <sup>1</sup> and I further added, 'the almost unvarying similitude that pervades the entire suite of the Sáh coins, in its simple mechanical indication, implies a comparatively speedy sequence of fabrication.' In endeavouring to account for the brief duration of the sway of these potentates, I conjectured a possible republican form of government under which 'two or more rájas were simultaneously invested with a share in the conduct of the state, or, if elected as sole rulers for the time being, the periods of retention of authority were limited directly and definitively by law, or terminable at the will of the majority.' <sup>2</sup> However, these difficulties are certainly more simply and satisfactorily explained by the supposition of a nomination of another description originally emanating from some Suzerain authority to delegated Satraps or governors of provinces.

As regards the consecutive succession of those princes, we have hitherto been compelled to rely upon patronymics and other indeterminate vouchers; and, though it is a question whether our power of defining the values of the date ciphers is sufficiently advanced to authorise our following a serial arrangement based upon their interpretation, we may still profitably test the process with this reservation. The fairly deciphered and reasonably congruous dates determine the order of succession as follows:—

LIST OF SÁH KINGS.		DATE.
1.	Íswara Datta, son of Varsha <sup>1</sup> .....	None.
2.	Atri Dámá, son of Rudra Sáh .....	311, 312.
{	3. Viswa Sáh, son of Atri Dámá .....	320, 335.
	4. Viswa Sínha, son of Rudra Sáh.....	323, 328, 335.
	5. Rudra Sáh, son of Rudra Sáh.....	330.

<sup>1</sup> [Jour. Roy. As. Soc., vol. xii., p. 37.]

<sup>2</sup> [Jour. Roy. As. Soc., vol. xii., p. 40.]

<sup>2</sup> [A private individual.]

LIST OF SAK KINGS.		DATE.
6.	Dámá Jata Sriyah, son of Dámá Sáh.....	344.
7.	Vira Dámá, son of Dámá Sáh.....	(no date deciphered).
8.	Dámá Sáh, son of Rudra Sáh.....	345.
9.	Vijaya Sáh, son of Dámá Sáh.....	353, 354, 355.
10.	Aśa Dámá, son of Rudra Sáh.....	370.
11.	Rudra Sinha, son of Swámi Jiwa Dámá <sup>1</sup>	374, 375.
{	12. Swámi Rudra Sáh, son of Swámi Rudra	
	Dámá .....	384, 390.
	13. Rudra Sáh, son of Vira Dámá.....	387.

It results from these dates, however imperfect in their comprehensive series, that either there was a double appointment of simultaneous effect, or an indeterminate periodical supersession and interchange of office-bearers, obeying the fiat of the feudal lord, in the one case; or, following the constitutional order occasionally interrupted by the revolutionary convulsions of independent government, in the other. We are still unable to identify the Swámi Rudra Dámá, son of Swámi Chandana, of the Girnár inscription, with any of those monarchs whose mints have supplied us with records of their rule; but looking to the delayed introduction of the extra title of Swámi—as now defined by the list adapted to the dates—we may, for the present, conjecture the individual to have been the father of Swámi Rudra Sáh; and may even, with but slight stretch of imagination, shadow forth an association of the dubious inscription date of \*72, with his fitting place in the order of succession and the independence then achieved, to which he lays claim in his monumental writing.

I next proceed to notice such numismatic novelties of this series as have come to light since Prinsep wrote.

Foremost and most important among these are the coins of Iswara Dutta, the son of Varsha, the first Rāja of my list.

The obverse legends of the three specimens I have had an opportunity of inspecting are, like the rest, couched in imper-

<sup>1</sup> [A private individual.]



Fig. 16. In this silver coin found in Katch in 1837, and presented to me by Mr. Wathen, the central emblem of the reverse is changed to a kind of trident; the legend is also altered from that of a Satrap to one of a paramount sovereign :

**परम भागवीर राजाधिराज श्री कुमारगुप्त महेंद्रराज**

*Parama Bhagavira Rajadhiraja Sri Kumara Gupta Mahendraraja.*

<sup>1</sup> Of the paramount sovereign the heroic king of kings Sri Kumara Gupta Mahendra.\*

Fig. 17, another of the same kind, having the same Sanskrit legend, but, behind the head, the Greek letters may be read ONONOT, or BAO NANO? it was presented to me with the last by Mr. Wathen.

Figs. 18, 19, 20, and 21, have the same symbol, but the workmanship is very much deteriorated. The legend on them all has at length been deciphered by the collation of several specimens presented to me by Mr. Wathen, and found in various parts of Katch, Kattywár, and Gujarát, by Capt. Prescott, Capt. Burnes, Dr. Burn; as well as the few inserted in the plates of Mr. Stuart's coins.<sup>1</sup>

**परम भगदत्तम राजाश्रीकुन्दगुप्त सम्राटि**

*Parama Bhagadattama (Ra) Raja Sri Kunda Gupta (ra) samratitya.*

But as I have a larger assortment of the coins of the same king to introduce into a future plate, I will postpone further mention of this series for the present.

[I append to this essay my latest classification of such silver coins of the Guptas as are associated with the types last adverted to by Prinsep.

#### SRI GUPTA.

CLASS A: Silver, weight 31 grains. Mr. G. H. Freeling, Bengal Civil Service. Unique.

OBVERSE:—Device, the original type of the Sáh head, apparently unchanged in outline or details.

LEGEND, as usual, in imperfect Greek characters, the concluding six letters of which alone are visible, thus—Α C I O I O

REVERSE:—Device, a singular figure that may possibly represent the early design of the Gupta peacock as rendered by the local artists, beneath which is a linear scroll of three semi-circles similar to that

<sup>1</sup> By a letter from Prof. Wilson I learn that Mr. Stuart's plate is to appear in the Royal Asiatic Society's Journal; but that it had time to journey to India and back before the outgoing number went to press! I regret I am thus deprived of the power of adding to this note the observations of the learned in England on the Surashtra coins.—J.P.



and, in regard to the barbarized Greek, the inheritance of Sâh imperfections; there need be no difficulty in recognising thus much of the power of imitation of its letters, when we know that on other mintages the Gupta artists were able to achieve fully intelligible Greek adaptations of Eastern names.

#### KUMĀRA GUPTA.

CLASS B: PL. XXXVII., figs. 16, 17; 'Jour. Roy. As. Soc.,' vol. xii., pl. ii., figs. 39, 40, 41, 42; 'Ariana Antiqua,' pl. xv., figs. 17, 18.

Obverse:—Head of the king in profile: the outline and design are nearly identical with the Surāshtran prototype—the mintage of the Sâh kings—at the back of the head is ordinarily to be seen a mutilated portion of the Scythian title PAO NANO. This important legend affords another link in the direct association of the Guptas with the Indo-Scythians, which is here the more marked, in that, while the device itself is servilely copied from the Sâhs, their obverse Greek legends are superseded by this new title.

Reverse:—It is difficult to determine satisfactorily what the emblem occupying the reverse field may be intended to typify, but the most plausible supposition seems to be that it displays an advance upon the conventional representation of the peacock under Western treatment, following out the artistic notion of that bird given in Śrī Gupta's coin.

Legend:—

**परम भगवत राजाधिराज श्रीकुमार गुप्त महेंद्रग**

*Parama Bhagavata Rājādhirāja Śrī Kumāra Gupta Mahendrag.*

The second word of this legend is the only portion of the whole that is at all open to question; it has been read *Bhānucitra* by Prinsep,<sup>1</sup> but this is not by any means a satisfactory interpretation. The first and third letters are fixed and constant in the various examples, and are properly rendered in each case as म and च; the second and fourth letters vary considerably in outline on the different specimens; the second letter I have never yet met with in its perfect shape as न when tried by the test of the न in Gupta, indeed the majority of the coins display it more after the form of a च, as that consonant is found later in

<sup>1</sup> [Prof. Wilson ('Ariana Antiqua,') has suggested *Bhānucitra* (?) which the Udayagiri inscription ('Bihar Topog.,' p. 161) rather recommends to our notice.]



the legend in Mahendrasya. The same remark also applies to the final न. I see that Prof. Mill has conjecturally supplied the word *Bhagavata* in the prefix to Kumāra Gupta's titles on the Bhitāri Lāt ('Jour. As. Soc. Beng.,' vol. vi., p. 4), but Prinsep's facsimile of the inscription, though it accords the needful space for the exact number of letters, gives the final as a manifest न; in saying this, however, I must remind my readers, that in the alphabet in question, the slightest possible inflection and continuation of a line constitutes the essential difference between the two letters न and न, and on the other hand the local copper plates of the Valabhis render the न very much after the shape of the Eastern न, while the indigenous न is but little different from the न of the coins under reference. And finally as the words *Parama Bhagavata* appear in all their indubitable orthography on the succeeding coins of Skanda Gupta, we may fairly assume a mere imperfection in the expression of the individual letters and leave the word as it has been entered in the legend above.

The coins under notice are not always complete in the Sanskrit legends; for instance, an otherwise very perfect piece in the cabinet of the Royal Asiatic Society has the word राजाधिराज abbreviated into राजाधिर; and No. 39, pl. ii., 'Jour. Roy. As. Soc.,' vol. xii., has the same word contracted to राजाधिर.

#### SKANDA GUPTA.

CLASS C: Pl. xxxvii., figs. 18, 19; 'Jour. Roy. As. Soc.,' vol. xii., pl. ii., figs. 43, 44; 'Ariana Antiqua,' pl. xv., fig. 20.

Obverse, as in class B, Kumāra Gupta, but the execution has greatly deteriorated; on some specimens traces of the word NANO are still to be seen.

Reverse:—The device in this class of money, appears to offer a more direct imitation of that of the Sri Gupta pieces, than did the intermediate Kumāra reverse types, these latter are seen to reject the foot scrolls and to vary the details of the centre figure to a considerable extent.

LEGEND:—परम भगवत श्री स्कन्द गुप्त कर्मादित्य

*Parama Bhagavata Sri Skanda Gupta Karmaditya.*

Prinsep, in his collated reading of the legends on these coins adopted the letter म (for महा) as occurring after the word भगवत् [or भगदत् as he made it], which he found to be followed by the title of राज, which precedes the name of the monarch. This rendering, he would seem to have drawn from fig. 29, pl. ii., Stuart ('Jour. Roy. As. Soc.,' 1837); but as the like letters do not generally recur, I have marked this as the exception rather than the rule.

The weights of these coins vary from 23 to 29 grains.

CLASS D: 'Jour. Roy. As. Soc.,' vol. xii., pl. ii., figs. 45, 46; 'Ariana Antiqua,' pl. xv., fig. 19.

OVERSE:—Crudely outlined head, with traces of the title NANO in front of the profile.

REVERSE:—Figure of Nandi identical in form and position with the emblem on the seal of the Valabhi family as found attached to their copper-plate grants. ('Jour. As. Soc. Beng.,' vol. iv., pl. xl., and p. 487).

LEGEND:—[Restored.]

**परम भगवत् श्री स्कन्द गुप्त कर्मादित्य**

*Parama Bhagavata Sri Skanda Gupta Karmaditya.*

These legends are frequently very incomplete, varying in the number of letters in each.

The standard of these coins is very uncertain, rising from a weight of 21 to 30 grains.

CLASSES E, F, G. [The references are prefixed to each variety.]

OVERSE:—The usual head, generally ill-defined, but still identical in many respects with the original device on the obverse of the Sâh medals; it is occasionally also accompanied by distinct traces of the word NANO.

REVERSE:—Central symbol in the form of an altar, which is supposed to represent the common altar-shaped receptacle of the sacred Tâlâ tree of the Hindûs. Legends restored.

CLASS E: 'Jour. Roy. As. Soc.,' vol. xii., pl. ii., fig. 49.

**परम भगवत् श्री स्कन्द गुप्त कर्मादित्य**

*Parama Bhagavata Sri Skanda Gupta Karmaditya.*

CLASS F: 'Jour. Roy. As. Soc.,' vol. xii., pl. ii., fig. 50.

**परम भगवत श्री स्कन्द गुप्त परमादित्य**

*Parama Bhagavata Sri Skanda Gupta Paramaditya.*

CLASS G: 'Jour. Roy. As. Soc.,' vol. xii., pl. ii., fig. 51.

**परम भगवत श्री विक्रमादित्य स्कन्द गुप्त**

*Parama Bhagavata Sri Vikramaditya Skanda Gupta.*

The irregularity in the completion of the legend, noted as occurring on Skanda Gupta's coins with the bull reverse, appears in a still greater degree in those of the present class.

The weight of these coins is more than ordinarily unequal, rising from 22½ to 33 grains.

Though not properly susceptible of classification with any Gupta series of coins, it is as well to take this opportunity of noticing in connexion therewith a species of money which seems to constitute an independent derivative from the same Saurāshtran type that served as a model for the local currency of the Guptas in certain western provinces of their empire.

I advert to the pieces figured as Nos. 6 to 8 and 9, pl. xxvii.<sup>1</sup> Prinsep, at the moment of their publication (December, 1835), scarcely attempted any decipherment of the certainly very unpromising legends, and was equally at fault in regard to the reverse device which he described as 'a symbol in the form of a trident;' when, subsequently, he came to take up the general subject of the Sâh and Gupta silver coinage in full detail, he still essayed no advance upon the attribution of this offshoot of their common prototype. In my paper on the Sâh kings,<sup>2</sup> I made some slight progress towards the determination of the purport of the legends; and, apart from the typical coincidences, I was able to demonstrate more precisely the Sâh association in the decipherment of the words **राष्ट्री महा वज्रपथ** on the margin of the best preserved specimen of the series.

<sup>1</sup> [Other examples of this currency will be found delineated in 'Jour. Roy. As. Soc.,' vol. iv., pl. ii., fig. 30; vol. xii., pl. ii., figs. 35 to 38.]

<sup>2</sup> ['Jour. Roy. As. Soc.,' vol. xii., p. 64, 15th April, 1848.]

A coin of Mr. Freeling's, of an early date in the serial issue, presenting a well defined and nearly complete legend, materially advances the inquiry, and furnishes a key to the strangely distorted letters stamped on the later emanations from the parent mint, though it leaves us still far from any conclusive assignment of the class of money to which it belongs. I proceed to describe the piece in the ordinary detail.

Silver, weight 27 grains.

Obverse:—The usual Śāh head, apparently but little modified. This surface of the coin is damaged, but fully one-half the marginal space, around the profile, remains uninjured, and in the total absence of any sign of a letter confirms my previous supposition,<sup>1</sup> that the use of the Greek legend was not extended to this class of coin.

Reverse:—Device, a barbarized imitation of the Minerva Promachos of the Bactrian coinage.

I was once disposed to look upon the singular figure on the reverse of these coins as the Buddhist device of a man: I was led to this conclusion by the similarity of the form of the figure sketched by Jas. Prinsep, in fig. 21, pl. iv., to that occurring on the Behat type of coins;<sup>2</sup> but I now observe that Prinsep, in his second engraving of the same coin (fig. 9, pl. xxvii.), omits the left arm, in its downward position, which constituted the most essential point of Behat identity.

LEGEND:—सह मुनहरकर महरपरमदवकभसदमन  
 OPTIONAL READING श्रीः ख रु ह कु

The configuration of certain letters in these legends demands a passing notice. The character which Prinsep took for *pr*, etc., is now satisfactorily proved to be an म: the form is peculiar, but still it bears sufficient affinity to the general idea of the Gupta म. In the later specimens of the coinage, its upper section is distinguished from the ordinary प by the rounding off of the lower portion of the first down-stroke, while the प itself is

<sup>1</sup> [ 'One item seems safely deducible from the unoccupied margin, to be found around the bust in the broader coins, viz., that the use of Greek or its attempted representation was here discontinued.'—'Jour. Roy. As. Soc.,' vol. xii., p. 62.]

<sup>2</sup> [Pl. xix., fig. 16; pl. xx., figs. 45, 47, etc.]

squared at the base. The nearest approach to identity with this numismatic 𑀘 is to be found in the outline of that character as expressed on the Udayagiri Inscription; but it must be remarked that this similitude affords but little aid towards determining geographical limitation, as the majority of the letters of the inscription itself are exceptional, and do not accord with the characters of the other writings of the same locality. The 𑀘 of these coins takes the same shape as those on Kumāra's silver coins, Class B, above adverted to. The remaining letters, as far as they have been definitively identified, seem to follow the ordinary Śāh style.—E.T.]



## XX.—ON THE APPLICATION OF A NEW METHOD OF BLOCK-PRINTING, WITH NOTICES OF UNEDITED COINS.

MAY, 1838.

IN all Muhammadan countries it is the well-known custom of those who move in the rank of gentlemen to apply their seals in lieu of their written signatures to letters, bonds, and other written documents—not as we are accustomed to do it, by an impression on wax, but by smearing the flat surface of the seal with ink, and printing in the manner of type, so as to leave on the paper a white cipher upon a black field. It may be in consequence of this custom, as much as from religious prejudices, that Muhammadan seals are almost invariably confined to letter mottos; seldom ornamented, but, if so, merely with flowers, etc., done in outline; because such only can be faithfully portrayed in a type impression, which, of course, cannot at all represent a head or other relieve design.

The money of the Musalmāns was in the same manner generally impressed only with the signet or the titles of the sovereign, well adapted to a flat surface of thin metal.

Seeking an easy and expeditious mode of making public the collection of Muhammadan coins in my own and my friends' cabinets, it thus occurred to me that by forming from them in sealing-wax, or in type metal, an exact counterpart of the die which had been used in striking these pieces, I should be able to use it, in the native fashion, for producing ink impressions along with the ordinary letter type; while, as the coin itself would in every case furnish the mould, every chance of error in copying would be removed: and, though the elegance of a shaded engraving could not be attained, still this would be more than compensated by the scrupulous fidelity of the representation.

My first trial was so encouraging that I at once resolved on carrying

the plan into execution on an extensive scale, and I have now prepared for the press upwards of two hundred coins done in this novel and exceedingly simple manner.

As, however, it will be in every respect more convenient to present them in a continued series as an accompaniment to my tables of the value of Indian coins already published, I propose merely to introduce into the pages of the Journal a few examples of such coins as are new, rare, or, from other causes, worthy of particular description.

But first, in deference to the established custom in such cases, I must assign to this newly-invented art some Greek polysyllabic appellation; and (without intending the undignified lapsus of a pun) I cannot propose one more expressive of the process than *Rupagraphy*—not from *rupée*, the common designation of our Indian money, nor yet from the Sanskrit word *rûpa*, 'form, likeness,' but in a genuine and orthodox manner from the Greek *πίπτος*, *sigularis cera*, or sealing-wax, the substance upon which the impression of the coin is first received, and which will itself serve as the printing material, if it be not desired to preserve the block in the more durable material of type metal, by a second transfer from the sealing-wax to a clay or gypsum mould, into which the latter substance can be cast in the usual manner. Some sharpness of outline is lost by this triple operation; and where a great many copies are not required, the *rupographical* process may be safely confined to the first stage, or simple impression on sealing-wax.

As a first specimen,<sup>1</sup> then, of the capabilities of this art of *rupagraphy*, I select a coin, or rather medal, purchased by myself some years ago at Benares. It is of Hussein Shah, generally accounted the last Sûfi monarch of Persia; for, after his abdication in A.D. 1135, his son Tusiép held but a nominal sovereignty, the real power being usurped by Mahmûd the Afghan.

Marsden would designate this as one of the medals of the Persian kings properly so called, intended to be hung and worn on the neck. It had, when I bought it, a hasp for suspension; but still I do not imagine it to have been struck for that express purpose, but rather as a crown piece for distribution to courtiers on a birth-day, as is still the custom at Dillî, at Lucknow, and other native courts. It is of nearly pure silver, and weighs 844.3 grains, a little short of five rupees, and somewhat above as much in value.

Marsden gives the drawing of another medal of the same monarch, which has merely the usual coin inscription.

<sup>1</sup> [I have not thought it necessary to reproduce these facsimiles, in illustration of the mechanical process. I have, however, retained the letter-press, as forming a portion of Prinsep's numismatic essays.]



The following is the numismatical description of my medal:—

SULTÂN HUSAIN SHÎH SAFFAVÎ,  
Reigned in Persia, A.H. 1106-1135, (A.D. 1694-1722).  
SILVER.

LEGEND OF THE OVERSEAS.

السلطان العادل الهادي الكامل الولي ابو المظفر السلطان بن السلطان  
*Centra* سلطان حسين شاه ۱۱۱۸ بهادر خان  
 الصقوي خلد الله ملكه و سلطانہ ضرب اصفهان

REVERSE.

*Area.* لا اله الا الله محمد رسول الله علي ولي الله  
*Margin.* علي حسن حسن علي محمد جعفر موسي علي  
 محمد علي حسن محمد

OVERSEAS:—The Sultan the just, the spiritual guide, the perfect, the ruler, *Abul Munaffer ul Sultan bin ul Sultan*, Sultan Husain Shah, Behâdur Khan, of the Safvi race: may God perpetuate his kingdom and his dominion! Struck at Isfahan, A.H. 1118 (A.D. 1694).

REVERSE:—There is no God but God! Muhammad is the prophet of God; Ali is the favorite of God.

MARGIN:—Ali, Hasan,—Husain, Ali,—Muhammad, Ja'far,—Mam, Ali—Muhammad, Ali—Hasan, Muhammad.

(The twelve Imâms in the order of their succession).

SPECIMEN II.

Is a coin presented to me by General Ventura to complete my series of the Pathân sovereigns of Dihli, being the only one of the founder of that dynasty which I had yet seen. Since then Capt. Burnes has favored me with the sight of a duplicate in less perfect preservation, procured by himself, I believe, at Kâbil. I give it as a specimen of what rupography can do under the most unfavourable conditions.

The form seems imitated from that of the Abbassite khâlifas, having the legend in concentric circles written in the Kufic form of Arabic. The facsimile represents exactly by the dark parts where the surface is worn smooth; however, by carefully comparing the two specimens, the whole has been made out satisfactorily with the aid of my brother, Mr. H. T. Prinsep.<sup>1</sup>

It is curious that the common title of *Shahâd ul din*, by which Muhammad is generally known in Indian history, does not appear on this Ghaznah dirhem, which gives him the two-fold designation of *Ghida ul din*, 'the supporter of the faith,' and *Moss ul nasir le din*, 'the humbled of the defender to the faith'—(ac. to the Kaliph of

<sup>1</sup> [I have slightly modified Mr. Prinsep's reading.]

Baghdād). Probably the patent for the new title of *Shāhād al dīn*, 'the flaming sword of faith,' given in honour of his brilliant and destructive expeditions into India, had not yet arrived from the court of the Kaliph.<sup>1</sup> If so, the word *thāsh* (90) in the date may be read wrong.

SHAHĀD UL DĪN, MUHAMMAD BIN SĀM,

Founder of the Ghori dynasty of DĪHL. Reigned A.H. 588-602 (A.D. 1192-1206).

SILVER. Weight, 72.4 to 92.6 grains.

LEGENDS ON THE CONCENTRIC CIRCLES OF THE OBTVERSE.

Line 1 هو الذي ارسل رسوله بالهدى ودين الحق ليظهره علي الدين  
كله ولو كره المشركون

2 لا اله الا الله محمد رسول الله السلطان الاعظم

3 ثبات الدنيا والدين ابوالفتح

4 محمد بن سام

DITO OF THE REVERSE.

Line 1 ضرب هذا الدرهم في بلدة غزنة سنة ستة و تسعين وخمس  
ماية

2 الناصر لدين الله السلطان المعظم معز

3 الدنيا والدين ابوالمظفر

4 محمد بن سام

[The inscriptions are copied at length in plate xii.]

OBTVERSE:—(From the Koran).—It is he that sendeth his messenger for righteousness, etc. (Surat, ix. 33, and xii. 6.)

There is no God but God, Muhammad is the prophet of God!—The mighty sovereign *Shāhād al dīn* or *al dīn*, *Abū'l fath*, Muhammad bin Sām.

REVERSE:—This *dirhem* was struck in the city of Ghaznah, in the year five hundred and ninety-six.

*Al Nāṣir al dīn ilāh* [the Khalif], the mighty sovereign, *Muṣṣir al dīn*, *abū'l Muṣṣir*, Muhammad bin Sām.

#### SPECIMEN III.

Among the coins discovered by General Ventura in the great topé at Manikyāla, and described in vol. iii., pl. xxi. [v.] figs. 10 and 11, [Art. VI.], were two of the Sassanian type, having Sanskrit legends on the margin of the obverse. I did not then attempt to decipher them, nor am I aware that their explanation has been since effected elsewhere.

Captain Burnes has been so fortunate as to pick up three more of the same curious coins, in his present journey, which are now in my hands, with other rare antique produce of his successful research.

<sup>1</sup> [The history of this double nomenclature will be found in detail in my Essay on the Coins of the Pathān Kings of DĪHL. London, 1847.]

They have every appearance of having been extracted from some similar ancient monument; which is by no means improbable, for we may be very sure that full half of the fruits of the late explorations of the various topes have evaded the hands of their explorers, and are scattered about the country to be hereafter picked up gradually from pilgrims or professed dealers; for a trade will soon be organized in such articles, if it be not already established. There is no harm in this, as it will tend to preserve such relics from destruction; but we must for the future be on our guard against spurious specimens, which will multiply daily.

Captain Burnes' discovery has been of the greatest service toward the deciphering of the Sanskrit legend: his coins have helped me to the general purport of the marginal writing, even if they have not wholly explained its contents. I found on collating the five legends new at my command, that three of them (*vide* pl. xli.) were short of the others by two letters, which in the most perfect of Captain Burnes' coins might be clearly read as *deva* विष्णुः. Remembering an analogous omission on one of the Gupta coins of Kanauj, wherein some specimens had the epithet *vijaya* and others *vijayajit*—both of the same meaning, I concluded that the preceding anomalous letter on all the coins must be a ञ, and, indeed, it has no small affinity to the modern Nāgarī and Bengālī ञ. The two preceding syllables, again, there could be no doubt about; being in all five examples देव *deva*. Now, *deva* and *devajit*, 'offspring of the gods,' is the well-known epithet of the ancient Persian monarchs as well as of the Sassanian race. Thus, in the trilingual inscription on the Nakshi-rustam sculpture given in Ker Porter's travels in Persia, vol. i., 548, we have in the Greek character: ΤΟΤΟ ΤΟ ΠΡΟΕΔΡΟΝ ΜΑΧΑΚΗΝ ΘΕΟΥ ΑΡΤΑΞΑΤΟΥ ΒΑΣΙΛΕΥΣ ΒΑΣΙΛΕΥΣ ΑΡΙΑΝΩΝ ΕΚΓΕΝΟΤΟ ΜΕΛΩΝ ΤΩΤ ΘΕΟΥ ΠΑΔΑΝΟΥ ΒΑΣΙΛΕΥΣ, which is repeated below in two forms of Pehlvi.

The same title in Sanskrit, *devaputra shahān shahi*, it may be remembered, is applied to the king of Persia in the Allahābād pillar inscription, as revised at p. 233, vol. i.

Again, on the Sassanian coins, read by the Baron de Sacy as far as they are published by Ker Porter (for I have not yet been able to obtain a copy of the Baron's work on the subject), the Pehlvi legend runs:

مزدن به شهبور ملکان ملکا منوجدری من یزدان

*Mazdan beh Shāhpūr malakān malakā minoshadri man yzdan.*

'Adorer of Ormuz, excellent Shāhpūr, king of kings, offspring of the divine race of the gods.'

<sup>1</sup> In the examples given, I should read this passage—*Malakān malakā Airōnas*, etc.; but the Sassanian coins require study ere they can be properly made out.





The natural deduction hence was that the rest of the Sanskrit legend would also turn out to be a translation, or an imitation of the Sassanian formula; and thus, in fact, it has proved to be.

Indo-Sassanian issues.

Silver. Weight 22 grains.

Legend.

Obverse:—Head of Mithra (Ormazd); Pehlvi very distinct, but unread; see pl. xl.

Reverse:—On the left, three letters of an unknown alphabet (like the Armenian?) or perhaps numerals?

Margia:—

**श्री हितिविर ऐराणव परमेस्वर श्री का हितियान देवजनित**

*Śrī hitivira Airāvan the paramēsvara Śrī Kā hitiyān devajanita.*

In this legend the only actual letters at all doubtful are the *p* and *me* of *paramēsvara*, and the first and last letters of the name. Indeed, the first letter is different in every example, as will be seen in the lithographed plate [xli.], as though they were all different names of the same family. Now to analyse the sentence:—

*Hitivira* I suppose to be a corrupt writing of हृदयिर् *hṛdīr*, 'solid in heart,' equivalent to the Pehlvi word *kēh*, translated by 'excellent.' *Airāvan* *aka paramēsvara*, and the supreme lord of Airān or Persia, may be read (perhaps better) *Airāvan va Paramēsvara*, the lord of Iran and Fars. For the name, we have evidently *gha*, *cha*, *va*, *gha*, or *ka*? followed by *hitigān* or *hitikhān*, and lastly *devajanita*, as before explained.

I am quite at a loss to find answers for such names; and although this is the third time I have alluded to this coin, gaining little by little each time, still I fear we have much to learn before we can unravel its entire history. For the present I leave unaltered the Pehlvi legend, merely placing under view in the annexed plate corresponding passages from regular Sassanian coins, which, being Old Persian, will soon lead to a knowledge of their alphabet and meaning.

[As intimated under Art. XV. (vol. i., p. 410), I have intentionally reserved all notice of the bilingual and trilingual emanations from Indo-Sassanian mints, and their subordinate illustrative varieties, until I could associate my latest tentative readings with Prinsep's closing illustration of this interesting division of Oriental Numismatics.

I have elsewhere (vol. i., p. 65) adverted to the obstacles that present themselves to any precise definition of the permutable

letters of the Pehlvi alphabet, which may not chance to be supported by the context, or some leading indication calculated to assure its exactitude; but, in the present instance, we have to encounter dialectic modifications and transmutations from other tongues, in addition to the ignorant treatment of a language at the best but imperfectly known to us.<sup>1</sup> The legends I have ventured to designate as Scythic, in virtue of their seeming derivation and the assimilation of certain of their forms to the Tartar alphabets, are to this time simply unintelligible.

The classification of these complicated materials will be seen to present somewhat of a difficulty—even if the data permitted it, they could not well be adapted to any epochal order—nor do the medals sufficiently accord to follow suit under the simple typical arrangement. I am, therefore, reduced to group the different series by the linguistic test, as exemplified by the following outline:—

- A. Scythic (two varieties).
- A a. Scythic and Sanskrit.
- A b. Scythic, Sanskrit, and Pehlvi (two varieties).
- A c. Scythic and Pehlvi.
- B. Pehlvi and Sanskrit (two varieties).
- C. Pehlvi, Scythic, and Kufic.
- D. Second variety of unidentified characters with Kufic.
- E. Kufic (alone).

CLASS A: Unidentified characters, supposed to be Scythic, Figs. 9 and 10, pl. xvi., 'Ariana Antiqua.'

I notice the class, represented by the above cited engravings,

<sup>1</sup> [For example, of all those who are learned in Zend and its cognate languages—of the various Professors who edit Pehlvi texts, or who put together Grammars of that tongue—no single individual has to this day been able to add one line of translation to the bilingual inscriptions of Hujt-Abd (Ker Porter, pl. xv., p. 513; Westergaard, 'Bundehesh,' p. 83; Spiegel, 'Grammatik,' p. 175, etc.), beyond what De Saey had already taught us in 1793. In brief, our power of interpretation falls us exactly where the Sassanians have omitted to supply us with the Greek translations they appended to some of the parallel texts, which, however, unfortunately extend but little beyond the titular and dynastic proemium of the inscription more immediately in question. I may, however, notice favourably Dr. Haug's tentative interpretations, confessedly incomplete as they are.]



merely as introductory to the several ramifications of the unidentified alphabet on the coins of later date, which form the subject of my present synopsis. I have to refer, however, momentarily to a still earlier exhibition of the literal series in the degradation and gradual transmutation of the original Greek legends, on the lower Kanerki coins, into the conventional forms and symbols of this system of writing—so that the Greek epigraph of *PAO NANO PAO OOHPI KOPANO* degenerates into the, to us, confused jumble of signs, which the cognate characters on other medals alone teach us to look upon as real and *bond fide* vehicles of phonetic expression—now extant upon the pieces engraved as No. 17, pl. xiv., ‘Ariana Antiqua’; No. 6, pl. xxii., *supra*; and No. 16, pl. xiv., ‘Ariana Antiqua.’

The Sassanian proper money, more especially under reference, exemplifies the free and independent use of the debateable character, as opposed to the possible mere mechanical barbarization of a foreign tongue in the other instance, and would seem to evidence the local currency of the speech it was calculated to embody in one section at least of the dominions acknowledging fealty to the successors of Ardashir Bâlbek.<sup>1</sup> Next in literal simplicity, though probably of a varied site and but little approximate period, must be quoted the series so peculiarly Indo-Sassanian in their identities, which still restrict themselves to this style of writing—Nos. 19, 20, ‘Ariana Antiqua,’ pl. xvi.

The Indo-Sassanian money with unmixed Sanskrit legends has already been adverted to, but further examples of the subordinate classes may be consulted under the following references:—‘Ariana Antiqua,’ pl. xvi., fig. 18 (पद्मि); *ibid*, pl. xvii., fig. 11, and pl. xxi., fig. 20; ‘*Jour. Roy. As. Soc.*,’ vol. xii., pp. 341, 342, etc.; ‘Ariana Antiqua,’ pl. xvi., fig. 8.

CLASS A a: (Bilingual Scythic and Sanskrit). Type, fig. 6, pl. xvii., ‘Ariana Antiqua.’

<sup>1</sup> [Other specimens of money bearing these peculiar legends may be seen under ‘Ariana Antiqua,’ pl. xvii., Nos. 12 to 15.]

OVERSE:—Head facing to the right.

LEGEND in unidentified characters. 'Jour. Roy. As. Soc.,' vol. xii., pl. iii., fig. 21.

REVERSE:—Fire altar and supporters about the pedestal of the altar  
 श्रीटटे | यहि श्री ?

CLASS A b: (Trilingual, Scythic, Sanskrit, and Pehlvi?).  
 Pl. v., figs. 10, 11; and pl. xli., figs. 1 to 5.<sup>1</sup>

OVERSE:—Device, as in the plate; the tiger-crest is less obscure on other coins.

Centre:—Unidentified characters.

Margin:—Legend also of doubtful import, but expressed in Sanskrit letters.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22  
 श्रीहितिविराजराचपरमेश्वरश्रीपाहितियतद्विषवारित

The above transliteration, based upon mechanical configurations alone, gives the preferable reading of each character, deduced from a collation of the legends on the numerous coins extant. As the language this legend embodies is, up to this time, unknown to us, there are no precise means of selecting the intentional as opposed to the technically rendered letters. For instance, it is doubtful whether the 6th form should be taken to stand for ष, ऐ, or वे. The 9th letter may be only one of the frequently recurring ष's; but I read it as ष, in accord with Prinsep, on the authority of one of Sir A. Burnes's coins (now in the possession of General Fox), which gives the character with more than usual distinctness. In the letters 10 to 14, I again follow Prinsep, on the principle of the probability of the combination rather than upon the positive assurance of the imperfectly discriminated letters which compose the word. And, with some such similar tendency, I formerly proposed the substitution of ष as the modern representative of No. 16, in preference to the optional फ or व of my author's text, a conjectural emendation since amply confirmed by the configuration of the letter in question on one of Colonel Lafont's coins in the British Museum.

<sup>1</sup> [Also 'Journal Asiatique,' vol. vii. (1839), pl. xvii., p. 34; 'Ariana Antiqua,' pl. xxi., fig. 22; 'Jour. Roy. As. Soc.,' vol. xii., pl. iii., figs. 17 to 20.



## REVERSE:—

To the left . . . افزو = ۱۱۵۷

To the right . . . پون شم دات = ۱۱۵۷

*Margin*:—Legend similar to that on the obverse exergue.

## CLASS A c: (Bilingual, Scythic and Pehlvi).

To complete the classification, I refer to two coins as yet incompletely deciphered in the Pehlvi, and altogether unintelligible in their Scythic legends, a description of which will be found at p. 332, 'Jour. Roy. As. Soc.,' vol. xii.

## VĀSU-DEVA.

## CLASS B: (Bilingual, Pehlvi and Sanskrit).

Prinsep's delineation, pl. vii., fig. 6,<sup>1</sup> sufficiently displays all the typical details of these pieces; I have merely to deal with the legends.

OVERSEER:—To the right of the figure is Pehlvi, but illegible in the specimen engraved.

(Increase) افزوت . . . = ۱۱۵۷

To the left . . . : ۱۱۵۷

سب ورسو تیف

Or *Sis Varsa tef* for *Sri Vasu deva*.

*Margin*:

۱۱۵۷ پون شم دات ورسو تیف وچمان اچ ملتان ملکا  
پون شم دات ورسو تیف وچمان اچ ملتان ملکا

<sup>1</sup> In nomine justi judicio, <sup>2</sup> *Sis Varsa tef*, Brahman, King of Multan.

<sup>1</sup> [Other engravings and facsimiles may be consulted in 'Ariana Antiqua,' pl. xvii., fig. 9; 'Jour. Roy. As. Soc.,' vol. xli., pl. iii., figs. 9 to 10.]

<sup>2</sup> [The usual formula opening, corresponding with the Arabic *Bismillah*.

See Anquetil 'Zend Avesta,' vol. ii., p. 341, correctly ۱۱۵۷

M. Spiegel does me but bare justice when he concludes that I was unaware of his previous decipherment of a portion of this marginal legend when I published my first paper on the subject in the pages of the 'Jour. Roy. As. Soc.,' vol. xii., p. 343. In truth, in those days, I was but as little in the way of seeing German books, as I have limited facility of reading them now; but I quoted, with full and deserved commendation, Prof. Olshausen's treatise, and noticed all other continental works, referring to the subject, of which I was able to obtain knowledge. In his 'Grammatik der Huzvāreschsprache' (Wien, 1856), M. Spiegel claims the title to priority of interpretation of the opening portion of this sentence, which it seems appeared in May, 1844 ('Jahrb. für wissenschaftl.-Kritik.' Mai, 1844, p. 703). And, further, he desires to









coins I would group under this heading; a delineated specimen of the class may be consulted in fig. 4, pl. xvii., 'Ariana Antiqua'; and my own attempts at their decipherment, together with facsimiles of the legends, are to be found at p. 329 *et seq.*, vol. xii., 'Jour. Roy. As. Soc.'




I advert to them now merely to complete the reference to the several series connected by similarity of linguistic legends with classes B, and B variety, above noticed.

Silver: weight, 58.4 grains. British Museum.

Obverse:—The usual linear imitation of the old Sassanian head, as adopted by the Arabs.

To the left: The standard monogram and 

To the right: Legend in unidentified characters, of the same style as in classes A, B.

Margin:—In Pahlvi letters , and in Kufic letters the words  .

Reverse:—The ordinary fire-altar and supporters.

To the left . . . شست =  = Sixty-three A.D.

To the right . . .  =  Khubus.<sup>2</sup>

Margin:—

Upper compartments: unidentified characters as on obverse.

Lower compartments:

To the left . . . . The standard monogram.

To the right . . . .  = 

Doubtful dates, 68 A.D. and 69 A.D.

CLASS D: (Bilingual, variety of unidentified character with Kufic).

To bring under one view the various transitional modifications of Sassanian money that may, by any possibility, bear upon the mixed series already noticed, I would advert to two subordinate classes, the first of which seems in its alphabetical devices to pertain to more westerly nations, though the sites of

<sup>1</sup> [See also Olshausen, German text, p. 56: 'Namismatic Chronicle,' vol. xi., p. 136.]

<sup>2</sup> [Khubus in Kerman, see *Qasbi* (خبيص) 199; 'Abulfida,' p. 442; Marco Polo *Kobinow*, p. 197.]

discovery connect it with the Central Asian types above enumerated.

Facsimiles of four of these pieces are given in Fræhn's 'Die Münzen (1832) Nos. 434, 435, pl. xvi., figs. **N** and **2**; and 'Jour. As. Soc. Beng.,' No. 101 (new series), pl. iii. figs. 6a, 7. Here again the epigraphs are bilingual; the legend on the right appears to read from the outside, commencing at the front point of the tiara, and the forms of the letters give it a decidedly Phœnician aspect, though for the present their elements defy decipherment. The short word on the left of the Sassanian crown is expressed in Kufic letters, its foot-lines being towards the centre of the piece. Professor Fræhn conjectured that the combination on fig. **N** might be resolved into the title of المهدي the Khalif (A.H. 158—169 A.D. 774—785), and this interpretation receives confirmation from a more legible specimen of the coinage lately acquired by the British Museum.<sup>1</sup> On fig. **2** and other coins the word appears to be composed of the letters سمي or سمي; but on an unpublished specimen of Colonel Anderson's the name is fairly legible as محمد which, it will be remembered, was Al Mabdi's proper designation.<sup>2</sup>

Class E: Kufic (alone).

I complete the series with a set of medals having many characteristics in common with the money classified under the heading D, though it is a question whether in point of antiquity they are not entitled to take precedence of their bilingual counterparts. The connexion and association between the two is marked both in the general design of the obverse device, and more distinctly in the distribution of the symbols on the reverse, where Ormazd's head, rising from the flames of the fire-altar, pronounces them either derivatives from a common stock, or imitations the one of the other. The peculiarity of the coins of Class E, however, consists in their having attained to the correct

<sup>1</sup> [Major Cunningham's collection.]

<sup>2</sup> [Price's 'Mahommedan Hist.' ii. 23. Fræhn, 'Recessio,' p. 24, etc. 'Handbuch zur Morgenländischen Münzkunde,' Stielke Leipzig (1846), p. 50.]

exhibition of Kufic legends, pure and simple. The earliest published piece of this class is also to be found in Professor Frøhn's comprehensive works.<sup>1</sup> The exergue on the obverse was read by that accomplished scholar as

بسم الله محمد رسول الله الخاقان الأعظم جمال أمير المؤمنين

To this I am able to add from coins in the possession of Col. Abbott (1), and Capt. Hay (3), the novel, though imperfectly deciphered, legends—

OBVERSE:—

بسم الله محمد رسول الله حمدله مامريه الأمير علي سلمن الله

The concluding words on other specimens seem to read . . . سلمن الله; and in one instance . . . سلمن الله.

On the reverse the pedestal of the altar is formed of the word على.

CLASS E: Variety.

TALHAH BIN TAHER, A.H. 209 to 213.

Copper: size, 5½; weight, 30 (and 31) grains. A.H. 209.

Two specimens, British Museum (Cunningham collection).

OBVERSE:—

Centre: لا اله الا الله وحده لا شريك له

Margin: بسم الله ضرب هذا الفلوس بمرسته تسع ومائتين

REVERSE:—Central device, a barbarized Sassanian head, to the right, with the usual flowing backhair, and traces of the conventional wings above the cap; the border of the robe is boxed or beaded.

In front of the profile is the name الطلحة

Margin: محمد رسول الله مامريه الأمير طلحة علي يدي عبدالله

I have two difficulties in regard to the above transcript from the original Kufic. The one in respect to the name of the place of mintage, which is visible on only one of the two specimens quoted, and is there somewhat confused in the original definition of the several letters, and otherwise obscured by oxydation. The third and fourth upright lines are opened out, or slanted away from one another, towards the top, which usually indicates

<sup>1</sup> ['Norm Symbole ad rem Numariam Muhammedanorum Petrop,' 1819, p. 45, pl. ii., fig. 14.]

the letter ع; though this sloping off may, perhaps, be a mere fortuitous imperfection of the die-engraving, the final letter is best represented by a modern ج, though it may, if needful, be converted into an ج.

The second point is of less consequence, and extends only to the almost invisible outline of the word I have supplied by ידי, under the requisitions of sense rather than on the absolute authority of the single coin which retains in any degree of distinctness that portion of its mint impress.

#### BRĀHMANĀBĀD COINS.

I am anxious to refer, even though momentarily, and in a necessarily imperfect manner, both from the condition of the materials and the want of preparation on my own part, to an interesting series of Indian coins that have only lately been brought to light during the excavation of an inhumed city in the province of Sindh, which Mr. Bellasis, its enterprising explorer, designates, perhaps somewhat prematurely, by the title of the ancient Brāhmanābād.<sup>1</sup>

However, be the site what it may, the laying open of this ruined town has made us acquainted with a class of essentially local money, of which the circle of our Oriental numismatists had previously no cognizance. Unfortunately, for the due and full explication of their historical position, the pieces obtained from this locality are nearly, without exception, of copper; and, in common with their more rare associates of silver, have suffered to an unusual extent during their prolonged entombment.

The general character of the coins, numbering some thousands, and in mere bulk sufficient to fill a 28 lb. shot-bag, is decidedly exclusive, involving Kufic legends with occasional provincial devices, and pertaining, as I suppose, to the Arab

<sup>1</sup> [Its exact position is stated to be 47 miles N.E. of Haidarābād. An account of the city of Brāhmanābād was first published by Mr. A. F. Jelliss in Bombay in 1856. A paper by Col. Sykes, on the same subject, appeared in the *London Illustrated News* of Feb. 21, 1857; and Mr. Bellasis' plans and sections in the number for the 28th of the same month.]

potentates of Mansúrah, who ruled over the lands of the lower Indus after the decay of the central power of Mohammedanism at Baghdád. The money of Mansúr bin Jamhúr (منصور بن جمهور الكلبي), the last Governor on the part of the Umsiyid Khalífa (about 750 A.D.), heads the list. I do not advert to the earlier coinages of central Asia, which have been transported, in the ordinary course, to the site of their late discovery; but commence the series with the coins which bear on their surfaces the earliest extant mention of the celebrated capital Mansúrah, the Arab reproduction of the still more famed Bráhmanábád of classic renown.<sup>1</sup>

<sup>1</sup> [See 'Baláhar,' Reineaud's 'Fragments,' 'Arabes et Persans relatifs à l'Inde,' Paris, 1846, p. 211.]

<sup>2</sup> ['Anrou, fils de Mohammed fils de Cassen . . . fonda, au delà du lac, une ville qu'il nomma Almanoura. C'est la ville où résident maintenant les gouverneurs.—p. 210. In a previous passage, Baláhar tells us, 'Ensuite Mohammed fils de Cassen, se porta devant la ville Bráhmanabád, qui se trouvait à deux parangs de Mansoura. Du reste Mansoura n'existait pas encore, et son emplacement actuel était alors un bois. . . . Mohammed plaça un lieutenant à Bráhmanabád; mais aujourd'hui la ville est ruinée.'—Reineaud, p. 189. The Arabic author from whom these facts are derived, أحمد بن يحيى الباذري, died in

379 A.D. or 392 A.D. See also Reineaud, quoting Al-Birúni's 'Tárikh-i-Hind Fragments,' p. 113. The MS. of the latter author's Kánún has the following—

يبنوا وهي من الكبري وسميت منصوراً لأن فاتحها قال نصرت

Jaubert, in his translation of Edrizi, on the authority of the original, states that the local native name of the place was ميران. Masudi tells us, 'I visited Multán after 300 A.D., when أبو الدلائل العنيد بن آمد القرشي السامي was king there.'

At the same time I visited el Mansúrah, the king of that country was then أبو العنذر عمر بن عبدالله, [of the family of Habbár ben el Aswad.]—p. 365, Sprenger's Translation. Again, with regard to the extent and importance of the kingdom, we are informed, 'All the estates and villages under the dependency of el-Mansúrah amount to three hundred thousand; the whole country is well cultivated, and covered with trees and fields.'—p. 326, *ibid.* Further references to the geographical and other questions involved will be found as follows.—Vissent's 'Commerce of the Ancients,' London, 1807, vol. i., p. 145. Gladwin's 'Ayin-i-Akbari,' vol. ii., p. 127, et seq. 'Mashául-al-Italá,' vol. ii., p. 161. 'Isakri' (A.D. 300 to 369), 'and Sind is the same as Mansúrah . . . . . Mansúrah which they call Sind.'—pp. 12 and 147. Ouseley's 'Oriental Geography' (London, 1800). 'Ibn Hanka' (A.D. 331 to 366). 'Gildemeister de rebus Indica' (Bonn, 1838), p. 166. Col. Anderson's Translation, 'Jour. As. Soc. Beng.,' vol. xxi., p. 49. Reineaud's 'Géographie d'Aboulfida,' vol. i., p. 286, etc. 'Liber Climatum Arabic Text,' J. H. Müller, Götting, 1822. Reineaud's 'Mémoire sur l'Inde,' p. 235. 'Ancient Accounts of India and China,' London, 1733; *ditto*, Reineaud's edition, Paris. Elliot's 'Historians of India,' Calcutta, 1849. Elliot's 'Appendix to the Arabs in Sind,' Cape Town, 1843. 'Asiana Antiqua,' p. 413. 'Jour. As. Soc. Beng.,' vol. vii., pp. 23, 279; vol. x., p. 183; vol. xiv., p. 75. McNisde, 'Jour. Roy.

I should be disposed to conjecture a considerable interval to have elapsed between the issue of this currency and that bearing devices somewhat in common, which displays the name of Abdulrahman (No 3 *infra*), but I am not now in a condition to enter into any satisfactory speculations as to the precise identity of this monarch, or the dates of any of his successors, whose names can be but faintly traced on the worn and corroded surfaces of the coin, submerged with the town of which it necessarily constituted the bulk of the then existing currency. I await, in short, the further supplies of better specimens, promised me by the energetic antiquarians on the spot,<sup>1</sup> and, individually, more leisure to look up the rather obscure history of the divisional government which these coins represent.

I have one remark to add in reference to the peculiarly local character of these numismatic remains, and the restricted antiquity of the town, as tested by the produce of the habitations hitherto penetrated, in the fact of the very limited number of Hindú coins found among these multitudes of medieval pieces, and that even these seem to be casual contributions from other provinces, of no very marked uniformity or striking age.

#### MANSUR.

No. 1, Copper : weight, 33 grains ; size 6.

OVERSE :—

*Area* : لا اله الا الله وحده لا شريك له

*Margin* : Illegible.

REVERSE :—

*Area* : Central symbol nearly effaced, above which appears the name محمد\*, and below the words رسول الله.

*Margin* : بسم الله نرب [هذا القاس بالمتصورة معاامرة  
(sic) متصور

As. Soc., vol. I., p. 23 *et seq.* Burnes' 'Bokhara,' vol. iii., p. 31. 'Jour. Roy. As. Soc.,' vol. i., p. 199. Postan's 'Observations on Sindh,' p. 143. Pottinger's 'Beloochistan and Sindh' (London, 1816), p. 281. Wood's 'Oxus' (London, 1841), p. 20. Mohammed Ma'ad's 'History of Sind,' A.D. 710 to 1690. 'Bombay Government Selections,' new series, No. 213. (1855.)

<sup>1</sup> [Messrs. Frere, Bellasis, and Gibbs, of the Bombay Civil Service.]

## No. 2:

Obverse:—Device altogether obliterated.

Reverse:—

*Area*: Central symbol in the shape of an elongated eight-pointed star: above, محمد; below, رسول الله.

*Margin*: (sic.) بالله ضربت بالمصورة معا امرت منصور.

## ABDULRAHMAN.

No. 3, Copper: size, 5; weight, 44 grains.

Obverse:—Central device, a species of quatrefoil, or star with four points, on the sides of which are disposed, in the form of a square, the words محمد رسول الله عبدالرحمن. The outer margin of the piece is ornamented with a line of dots enclosed within two plain circles, with four small dotted semicircles to fill in the space left vacant by the angular central legend.

Reverse:—A scalloped square, surrounded by dots, within which, arranged in three lines, are the words بالله عبدالرحمن لسلمار; the concluding word I am unable satisfactorily to decipher, it is possibly the name of Abdulrahman's tribe.

## MUHAMMED.

No. 4: A unique coin of apparently similar type—though with an obverse absolutely blank—replaces the name of Abdulrahman on the reverse by that of Muhammed. The concluding term is identical with the combination above noted.

## ABDALLAH.

No. 5: Copper.

Obverse:—Device as in No. 3 (Abdulrahman).

Legend: محمد [رسول الله] عبدالله

Reverse:—Blank.

No. 6. Copper: size, 3½; weight, 18 grains.

Obverse: Central device as in No. 3, around which in a circular scroll may be partially read the formula لا اله الا الله وحده لا شريك له.

Reverse:—Centre device composed of the name of عبدالله; the two portions عبد and الله being crossed at right angles, in somewhat of accord with the scheme of the obverse device.

The marginal legend is arranged in the form of a square and consists of the words محمد رسول الله [الا] مير.



No. 7. Silver: size, 2; weight, 8.4 grains.<sup>1</sup> Devices are discontinued and replaced by simple Kufic legends, as follows:

Obverse:— لَا إِلَهَ إِلَّا اللَّهُ وَحْدَهُ لَا شَرِيكَ لَهُ

Reverse:— مُحَمَّدٌ رَسُولُ اللَّهِ الْعَمِيرُ عَبْدُ اللَّهِ

No. 8. Copper, of similar legends. Other specimens vary in the division of the words, and omit the title of *Al Amir*.

#### OMAR.<sup>2</sup>

No. 9. Silver: size, 1½; weight, 9 grains. Five specimens.

Obverse:—No figured device. Legends arranged in five lines.

بِاللَّهِ مُحَمَّدٌ رَسُولُ اللَّهِ عَمِيرُ

Marginal lines, plain or dotted, complete the piece.

Reverse:—Kufic legends alone in three lines.

بِاللَّهِ يُوسُفُ عَمْرُو بْنُ النَّصْرِ

No. 10. Copper: size, 4; weight, 35 grains. Common.

Legends as in the silver coins with the exception that the *بنو* is placed, for economy of space, in the opening between the *ل*'s of *بِاللَّهِ*. The die execution of these pieces is generally very inferior.

No. 11. Copper: size, 3½; weight, 21 grains. Unique.

Obverse:—Blank.

Reverse:—

Centre: بِاللَّهِ عَمْرُو بْنُ النَّصْرِ

Margin: سُوسُ بِالْمَنْصُورَةِ سَنَةِ أَرْبَعٍ —

#### OMAR (P)

No. 12. Copper: size, 4½; weight, 36 grains. Mr. Frere, unique.

<sup>1</sup> [Among the silver coins exhumed from the so-called Brāhmanābād some are so minute, as to weigh only 1.2 gr.]

<sup>2</sup> [I am inclined to identify this ruler with the Omar bin Abdallah, above indicated as the reigning sovereign of Mansurah, at the period of the geographer Mas'ūdī's visit to the valley of the Indus, and of whom he speaks further in the following terms:—'There is some relationship between the royal family of el-Mansurah and the family of ash-Shawārih, the Kadi, for the kings of el-Mansurah are of the family of Habbār ben al-Arwad, and have the name of Beni 'Amr ben 'Abd al-Ayiz el-Kasbi, who is to be distinguished from 'Amr ben 'Abd al-Ayiz ben Marwān, the Omāyīd (Khalīf).—Spengler's 'Meadows of Gold,' p. 386. See also Gildemeister, quoting 'Din Hukūk,' p. 168, and Elliot, citing the same author ('Historians of India'), p. 63.]

Obverse:—Central device, four lines crossing each other at a common centre, so as to form a species of star of eight points; four of these are, however, rounded off by dots.

Legend, arranged as a square:

محمد رسول الله سر

with single dots at the corner angles, and two small circles filling in the vacant spaces outside of each word.

Margin: Two plain lines, with an outer circle of dots.

Reverse: Central legend in three lines within a triple circle composed of dots, circlelets, and an inner plain line. I transcribe the legend, with due reservation, as:

بنو بالله عمرو بن النصر



XXI.—ADDITIONS TO BACTRIAN NUMISMATICS,  
AND DISCOVERY OF THE BACTRIAN  
ALPHABET.

(JULY, 1838.)

It is not an easy matter to gratify my numismatological readers with a plate of entirely new Bactrian coins so frequently as they would wish; for, independently of the time and labour requisite for engraving them, the subject, as to new names at least, may be looked upon now as nearly exhausted. Opportunities, however, still occur of verifying doubtful readings, of supplying names where they were erased or wanting in former specimens, and of presenting slight varieties in costume, attitude, and other particulars, which tend to complete the pictorial history of the Bactrian coinage.

For these several objects I enjoyed a most favorable opportunity during the visit of General Ventura to Calcutta last winter; his second collection, though possessing few types or names absolutely new, boasted of many very well preserved specimens of the small silver coinage of Menander, Apollodotus, Lyzias, Antimachus, Philoxenes, etc. The General most liberally conceded to me, from his abundant store, several that were wanting to my own cabinet, both of silver and

copper; and he placed the rest also at my disposal, to draw, examine, and describe, as I might feel inclined. Unfortunately, I refused to take charge of the Indo-Scythic gold series for examination, finding nothing particularly new among them, the consequence of which was that the whole were stolen by some sharper at the hotel where the General was residing, and none have since been recovered! I am now speaking of last January! Since then I have received a coin and drawings of several others from Gen. Court; also two or three from Gen. Allard; and, latterly, the whole produce of Capt. Barnes' search in the neighbourhood of Kábul have been entrusted to my care. It is the very latest arrival from him (or rather from a valuable member of his expedition, Dr. Lord), consisting of two beautiful coins of Eueratides, that stimulates me at once to give forth all that have accumulated in my Bactrian drawer since I last wrote on the subject. I must give Dr. Lord's coins the first place, because one of them is, perhaps, the most curious and important that has yet fallen into our hands.

Plate xlii. contains etchings of both of these coins to which I would thus draw prominent attention. Dr. Lord thus describes the place and circumstances of their discovery:—

'I do myself the pleasure to forward two coins, which I have been so fortunate as to find during my late visit to Turkistán. The double-headed coin I found at Tash Korgán, the other at Kundár.'

Fig. 2 I need not particularly describe, as, though new to us, it has been published from other specimens in France. The reverse has a naked figure of Apollo in lieu of the Dioscuri.

Fig. 1 is an unique medallion (that is, a tetradrachma) of Eueratides.

OVERSE:—A fine youthful head and bust of the king wearing a plain steel helmet, with the bands of the diadem protruding behind.





On the area above and below—BAZIAKTE METAX ETEPATIANE in the nominative case.

REVERSE:—Busts of a man and a woman looking to the right: hair simple and without diadem; legend above MAIOKAEOTE below KAI AAOAIKHE.

Supplying the word *ισος*, we have here the parentage of Eucratides developed in a most unexpected way: 'The great king Eucratides, son of Heliocles and Laodice.' The former is a well-known Greek name, but it is evident from the absence of title and diadem that he was a private person, and yet that his son, having found his way to the throne, was not ashamed of his unregal origin.<sup>1</sup>

I have long been pledged to my readers to give them a new alphabet for these Bactrian legends, and I think the time has now arrived when I may venture to do so; or at least to make known the modifications which have been elicited by the abundance of fresh names and finely preserved specimens which have passed under my eye since that epoch. It must be remembered that the only incontestible authority for the determination of a vowel or consonant is its constant employment as the equivalent of the same Greek letter in the proper names of the Bactrian kings. Beyond this we have only analogies and resemblances to other alphabets to help us, and the conjectural assumption of such values for the letters that occur in the titles and epithets of royalty as

<sup>1</sup> [I have omitted some of Prinsep's original speculations in regard to the Indian origin of Eucratides' mother, that he was led into by the faulty drawing of the coin supplied to him by Mr. Maassen, and which the sealing wax impression of the original in his possession did not enable him to rectify until new information reached him at the moment of the publication of the current number of the '*Jour. As. Soc. Beng.*' when the error was unhesitatingly corrected by a fly-leaf note.]



may furnish an admissible translate of the Greek in each and every case.

It will be my object presently to show that this can be done, as far as the coins are concerned, by means of the Sanskrit or rather the Pālī language; but in the first place it will be more convenient to bring forward my revised scheme of the alphabet as far as it is yet matured. Unfortunately the exceeding looseness of orthography and caligraphy which could not but prevail when one foreign language (for such it was to the Greek die-cutters) was attempted to be rendered by the ear in another character, equally foreign to the language and to the scribes, with abundance of examples before me, renders it almost impossible to select the true model of some letters for the type-founder!<sup>1</sup>

I begin with the initial vowels:

ॐ, *a*. This symbol continues to occupy the place of the vowel *a* in all the new names lately added to our list, beginning with the Greek *Α*, of which we have now no less than seven examples. The other short initials appear to be formed by modifications of the alif as in the Arabic, thus:

γ, *α*, is constantly employed for the *ε* of Greek names.

Ϸ *u*, is found following it in the word Eucratides, as though put for the Greek *τ*, but other evidence is wanting.

Ϸ [with the head-line reversed], *i*, though seldom met with on the coins, is common in the inscriptions, and by analogy may be set down as *i*.

ḍ *d* [the Numismatic *an*, plate xi.], is employed in words beginning with *AN*.

The medials seem to be formed in all cases by a peculiar system of

<sup>1</sup> [It will be seen that under the combined poverty and imperfection of the only Bactrian type available in Europe, I have had much difficulty in doing justice to Prinsep's latest revision of this alphabet. As my author's own forms were often faulty and defective, it was of course useless to reproduce the deficient letters, or to do more than indicate as nearly as possible, though necessarily in somewhat of a patchwork manner, the essential position in which he left the study of Arian palaeography.]

diacritical marks; of these the *i* is the best determined, being found applied to almost all the consonants in the form of a small stroke crossing the letter. The *u* is uncertain; it may be a prolongation below in the *r*,—a foot stroke or *mātra*. The *e*, I judge from the Manikyāla inscription, to be a detached stroke behind and above; in a few cases only joined. The *o* may be the loop so often seen at the foot of the written letters. I feel it to be a little premature thus to assign sounds without any positive authority; but it was from a similar assumption of the value of its vowel marks that I was led to the discovery of the Indian pillar alphabet.

With regard to the consonants, I ought, perhaps, to follow the order of the Hebrew alphabet; but, as the language to be expressed is allied to the Sanskrit, it may be more convenient to analyze them in the order of the latter.

१. *ka*. This letter on further scrutiny I find invariably to represent *k*; and its place is never taken on the coins by १, as I formerly supposed. It occurs also with the vowel affix *i*, as *kī*; also, but seldom, with the *u*, as *kū*; and with the subjoined *r*, as *kra*. In the compounds, *kka*, *kki*, a form is adopted more like the Hebrew *g p* (quere *g*). There are two or three examples in support of it.

३. *ka*, is limited as such to the name of Antimachou; but I find it also representing the *g* in Abagason. In the written tablets we have various forms seemingly identical with it; yet one of these, with the vowel *i*, is used in some places for *kki* (intended for the inflected *i*?). There is no small affinity between them and १. ३, the *ka* of the old Sanskrit written invertedly.

[1st, see second form of Numismatic ३; 2nd, the same inflected with *r*; 3rd, the compound represented by the eleventh letter in the inscription from the brass cylinder, pl. vi., vol. i.] I place these forms here because they occur several times in the tablets, and they bear some resemblance to the *g* of the Pehlvi.

Of the Sanskrit palatals neither the Greek nor the Chaldaic alphabets contain any proper examples—the *ch* and *j* are modified to *x* and *ts*—which letters we must expect to find substituted for the Sanskrit class च छ ज झ.

[No. 1, a *v* reversed; 2, a *d* reversed. See Numismatic *aaa*, pl. xv.] The first of these forms is found at the close of a series of words terminating each in the same vowel inflection, *i*, *e*; which makes me suppose it to be the Sanskrit conjunction *cha*, uniting a string of epithets in the locative case. As yet I have no stronger argument for its adoption.

५. or १, *ja* (*tsa*?). The form of the Chaldaic *ts* १, agrees well with

the first; indeed, in many coins of Azes, the Bactrian form is identical with the Chaldaic. I find that in every case this letter may be best represented by the Sanskrit ञ *j*, and, indeed, in the early coins of Apollodotus, etc., its duplicated form [the fourth letter in *Moharaja*, pl. xii.] seems to be copied from the ancient Sanskrit ए, reversed in conformity with the direction of the writing. The only inflection I have met with of this letter is *ju*.

I can make no discrimination between cerebrals and dentals; because the Greek names translated have of course no such distinctions, but from the variety of symbols to which the force of *d* and *t* must be ascribed, I incline to think the alphabet is provided with a full complement, though it is in the first place indeed almost a matter of option which letter to call *d*, *t*, *c*, or *s*, they are all so much alike—thus for *t* we have 𐎧, 𐎨, 𐎩, and 𐎪, and with the vowel *i*, 𐎫, 𐎬, etc.

As the equivalent of *d* again we have the same 𐎧, 𐎨, 𐎩, and also three other forms [1st, the second of the fifth Tradota, pl. xii; 2nd, the third of Menander; 3rd, the penultimate in No. 32, pl. xii.]; and for *dhi*, [*dhi* and *dhi*] the formerly evidently 𐎫 with 𐎬 subjoined; the latter quasi *thi* or *dhi*: sometimes it is nearer 𐎫 *ri*.

I do not attribute this ambiguity to the letters themselves so much as to the carelessness and ignorance of the writers, who might pronounce the foreign name Apollodotus, indifferently Apalātada, Apaladata, and even Apalanata. Being obliged to make a choice, I assume as in my former paper—

𐎧, 𐎨 for *ta*, whence the various inflections.

𐎩, *tha*, *tha*, commonly used for *dā*, and its inflections.

𐎪, 𐎫, 𐎬 for *da*, *nda*.

𐎭, *na*. I do not perceive any indications of the other nasals, and indeed, they seem to be omitted when joined to another consonant: but I find something corresponding to the *nasals* attached below the vowel *a*, and before consonants it seems represented by *u*.

𐎮 *pa*. The first of the labials is one of the best established letters. It has been discovered also inflected, and united with either *h* or *s* in 𐎮 *pā* or *ps*: also with *h* in *pā*, and in other combinations which will be noticed as they are brought forward.

𐎯, *ph* or *fa*? I have no stronger reasons than before for continuing this value to 𐎯:—it seems in some few cases to usurp the place of *f*; it is inflected also.

*Ba*? is still undetermined; in the doubtful name above quoted, ΑΒΑΓΑΖΟΥ, it seems to be replaced by 𐎮 or 𐎯—the aspirate is also unknown.

𐎰 *ma* 𐎱. This letter admits of no doubt whatever; but in the

Menander form,  $\phi$ , I now recognize the inflection *me*, corresponding with the Greek name more closely. The second or what may be called the printed form of *me* has a considerable affinity in form with the old Sanskrit  $\text{मि}$  or  $\text{म}$ , whence it may be almost as readily derived as the Burmese form of the Pāli *me*.

Α *ya*. This letter is unchanged: it invariably replaces *z* and *y*, and sometimes *j* where the latter would be expressed by the Sanskrit  $\text{य}$  or  $\text{ज}$ . It may perchance have been modified from the letter, for in some examples it is turned up on the sides thus,  $\omega$ ; the inflected form *yi* is of common occurrence: *ya* less common.

Ϟ, ϙ, ι, Ϛ. It is necessary to preserve these three representatives of *r*; I incline to think that the prolongation below may be the *midra* or the long *d* inflection, *rd*; for the first form is used in Ermaïou where there is no intervening vowel. It is only distinguishable from *d* by the foot-mark of the latter, which seems to be often omitted notwithstanding.

ϛ, λ. Further acquaintance has taught me that this is the only representative of *l* in Greek names: the instances wherein the *l* before appeared to be replaced by  $\text{λ}$  have been disproved by duplicate coins. The inflected form  $\text{λ}$ ,  $\text{λ}$ , has numerous examples among our new acquisitions.

Ϝ *sa*, and *ed*, rest on strong but not indisputable authority, as will be seen below.

ϝ, Ϟ, λ. *sa* has been removed from its former position as *l* on ample grounds; and the value now assigned has, I think, equally strong support—though as far as Greek names are concerned it rests solely on the initial syllable of Helioctes, λ. There is, again, a similarity worthy of remark between  $\omega$  inverted, and the old Sanskrit *sa*,  $\text{स}$ ,  $\text{स}$ .

ϟ, *ss*. To this letter I gave the sound of *s* on the former occasion, because I found it the general termination of nominatives masculine in Zend and Pāli—replacing the Sanskrit *visarga*,  $\text{ः}$  or  $\text{ः}$ . Since then I have found the same letter (affected with the vowel *i*) in two Greek names as the equivalent of *ss*, and I am too happy on other considerations to adopt this as its constant value; whether the dental *s* of the Sanskrit will best represent it remains to be seen, but the nearest approximation in form occurs in the Hebrew  $\text{ס}$  *s*: there are certainly two other characters [one like a  $\text{ז}$ , or  $\text{ז}$ ], and  $\text{ז}$ , having the force of *s* or *ss*. The former I should presume to be the Sanskrit *śa*  $\text{श}$ , from its likeness to the old form  $\text{श}$ . The latter,  $\text{ז}$ , may be a variation of  $\text{ז}$ , for which it is sometimes used, but rather by change of the Greek *z* to *z*, than as being the same letter, for elsewhere it takes the place of the Greek *z* as in  $\text{ΑΖΙΑΙΣΟΥ}$ , while  $\text{Α}$  occurs for *z* in the same word. In

form it seems to be the Chaldaic  $\eta$ , or  $h$  soft. Several inflections of these letters have been observed.

It will be naturally expected that the alterations I have been compelled to adopt in the value of many of the above letters must produce considerable modifications in my former interpretation of the Bactrian legends. Indeed, when I look back at my attempt of 1835, I must confess that it was very unsatisfactory even to myself. I was misled by the Nakshi-rustam trilingual inscription, wherein the title of king of kings has been uniformly read as *malaka malaka*, though I balanced between this and the term *malakas*, having found  $\pi\alpha\sigma$  on the Indo-Scythian series. But, once perceiving that the final letter might be rendered as *as*, which is the regular Pāli termination of the genitive case, I threw off the fetters of an interpretation through the Semitic languages, and at once found an easy solution of all the names and the epithets through the pliant, the wonder-working Pāli, which seems to have held an universal sway during the prevalence of the Buddhist faith in India.

The best test of the superiority of a Pāli interpretation will be found in its application to the several royal titles of the Greek kings, which were previously quite unintelligible. The first of these is simply  $\pi\alpha\tau\alpha\rho\epsilon\upsilon\varsigma$ , which is constantly rendered by  $\pi\alpha\tau\alpha\rho\epsilon\upsilon\varsigma$  *mahardjasa*, the Pāli form of  $\text{महाराजस}$ . It is true that there is some doubt whether the long vowel *ā* is here applied to the  $\lambda$  and  $\rho$ ; but we have long since been accustomed to the omission of this and even other vowels in the Satrap coins of Surakatra. The word is often written  $\pi\alpha\tau\alpha\rho\epsilon\upsilon\varsigma$ , whence I have supposed the dot or dash below to stand for *ā*.

The next title is  $\pi\alpha\tau\alpha\rho\epsilon\upsilon\varsigma$   $\pi\alpha\tau\alpha\rho\epsilon\upsilon\varsigma$ , which we find replaced by *mahardjasa rdjardjasa*, a perfectly sound and proper expression according to the idiom of the Sanskrit. But in one class of coins, that of Azes, there are some very well preserved specimens, in which the second part of the title is  $\pi\alpha\tau\alpha\rho\epsilon\upsilon\varsigma$ , which is evidently *rdjdtirdjasa* (or *adhi*, for the letter has a turn at foot, and may be meant for *dhi*), the regular  $\text{राजाधिराजस}$  of the paramount sovereigns of India. The syllable *dhi* is often written  $\eta$  *ti*,  $\eta$  *ri*, or even  $\eta$  *ti* or *gi* (?) but the vowel *i* shows what is meant.

To the title of king of kings is generally added on the Greek side the epithet  $\mu\epsilon\gamma\alpha\lambda\alpha\upsilon\varsigma$ , for which we have an addition in Bactrian of the word  $\pi\alpha\tau\alpha\rho\epsilon\upsilon\varsigma$  *mahatasa*, one of the forms of the Pāli genitive of *mahan* (or *mahat*) great, which makes only *mahatasa*  $\text{महतः}$  in Sanskrit. The full title then is thus found to be *mahardjasa rdjadhirajasa mahatasa*, which is far preferable to the clumsy and unsatisfactory *malakao kakao malako* of my former paper, now rectified by the rejection of  $\eta$  as *ka*.

The next title in the list is ΔΑΤΗΡΟΞ, for which we have rather a dubious word of four letters, either *dadatas* or *nasadatas*, the former equivalent to दत्तः the bestower of *dāna*, a word comprehending protection as well as charity;—the latter to नदत्तः 'of the giver of pleasure.'

The epithet of next frequency is ΑΝΙΚΗΤΟΥ, the unconquered, which is translated by *apavikatas* (Sansk. अपविहृतश्च), the unbeaten or invincible. It is this word principally which leads me to make P *va*, and to distinguish it from P *ti* and P *ti*, with the latter of which I before confounded it.

Next in order comes the somewhat similar expression ΝΙΚΗ+ΟΡΟΥ; but the correct definition of this epithet is preserved in *jayadhārassa*, the bearer of victory. In one instance the ΔΗ is written separately ΠΥΠΛΛΥ; in others (like the ΔΗ of *adhe*) it is *jayadarasa*, but there can be little doubt of the sense; and this word is a strong confirmation of the value of the letter P, or P *ja*.

There is a second epithet of nearly the same signification which is common enough on the Seleucidan coins, but comparatively rare on those of Bactria, ΝΙΚΑΤΟΡΟΞ. This epithet was found on the unique coin of Amyntas, of which Col. Stacy was unfortunately robbed, and on one or two others. In the Bactrian translation the same word is used in every case as for ΝΙΚΗ+ΟΡΟΥ, namely, *jayadhārassa*, the possessor of victory, or the victorious.

There remains but one epithet to be accounted for (for ΔΙΟΝΑΤΟΡΟΞ of the Apollodotus unique coin does not seem to be translated):—it occurs on the coins of Helioeles, Spalurmes, and Archelies; I mean ΔΙΚΑΙΟΥ 'the just'—a rare epithet in any but the Arsacidan line of kings. This is everywhere rendered by *dharmilasa* (Sansk. धर्मिकश्च) the exact expression required, and one constantly applied to Indian kings.

I am wrong in saying that the epithets are here exhausted, for on the unique coin of Agathocleia in Dr. Swinney's possession there is a singular epithet ΑΣΤΟΡΟΝΟΥ, 'heavenly dispositioned,' yet unaccounted for: of these, the two or three first letters are lost, and the last two ΠΥ *faa* may terminate *deevastasa* or some such simple translation. It is a curious fact that the name of the queen does not appear to be feminine in the Bactrian legend; and the title *mahardjasa* is also in the masculine.

There is another expression on a coin of Spalurmes, viz., 'king's brother,' ΠΗΑΤΜΟΞ ΔΙΚΑΙΟΥ ΑΔΕΛ+ΟΥ ΤΟΥ ΒΑΣΙΛΕΥΞ, the Bactrian translation of which at first seemed inexplicable; but, by means of



another coin, I think I have solved the enigma, as will be presently explained.

Another expression for the 'great king of kings,' is met with in one example only, as far as my information goes, namely, in the rude square coin of Spalirina, of which four specimens have passed through my hands: here the expression runs *maharajan mahataman* (quasi **महात्माकस्य**); but no great stress can be laid on such rude specimens.

Having thus satisfactorily disposed of the regal titles, we may place once more under review the whole of the Greek names with their Bactrian transcripts collated from a multitude of specimens.

GREEK NAME.	BACTRIAN IN ROMAN CHARACTER.
ΑΖΟΥ	<i>Ajau</i> (pronounced <i>Ajau</i> )
ΑΖΙΑΙΣΟΥ	<i>Ajiaishau</i> .
ΑΠΟΛΛΟΔΟΤΟΥ	<i>Apollodotou</i> .
ΑΡΑΘΟΚΑΣΕΣ	(found only in the old Bactrian) <b>𐤀𐤁𐤁𐤐𐤕𐤂𐤓𐤕</b>
ΑΡΑΘΟΚΑΣΙΑΣ	<i>Arakaspasia</i> (or <i>pas</i> ).
ΑΝΤΙΝΑΟΥ	<i>Antinaiou</i> .
ΑΝΤΙΑΚΙΔΟΥ	<i>Antiakida</i> .
ΑΝΤΥΟΥ	<i>Antiu</i> .
ΑΡΧΕΛΟΥ	(written, Bactrian name usual)
ΑΒΑΡΑΣΟΥ	<i>Abarakasu</i> .
ΕΥΚΡΑΤΙΔΟΥ	<i>Eukratida</i> .
ΕΡΜΑΙΟΥ	<i>Ermaia</i> .
ΗΛΙΟΚΛΕΣ	<i>Heliokles</i> .
ΔΙΟΜΗΔΟΥ	<i>Diomede</i> .
ΛΕΙΟΥ	<i>Leiou</i> (or <i>Lantiu</i> ).
ΜΑΥΟΥ	<i>Maua</i> (or <i>maia</i> ).
ΜΕΝΑΝΔΡΟΥ	<i>Menandru</i> (or <i>Menandru</i> ).
ΦΙΛΟΞΕΝΟΥ	<i>Philoxenu</i> (or <i>Philoxenu</i> ).

Then follow a class of coins in which the names are either quite different on either side, or the Greek is intended for a transcript or translation of the native appellation.

ΟΝΕΝΟΥ (of Yonnu)	<i>Oneshu</i> (or <i>Balashu</i> ?)
ΣΠΑΣΥΡΙΟΥ (or ΣΠΑΣΥΡΙΟΥ)	<i>Spasirina</i> .
ΣΠΑΣΙΡΙΟΥ	<i>Spasirina</i> .

Then the group of the Ferus, or Thraakes dynasty, if we may so call it, of which some new specimens will be introduced presently—

ΤΡΑΟΦΕΡΟΥ	<i>Trakhe</i> (or <i>Trakhe</i> ).
ΓΟΝΔΟΦΑΡΟΥ	<i>Gondophar</i> .
ΗΡΟΝΑΖΕΦΕΡΟΥ	<i>Herodotus</i> ?

but it may be doubted whether all these are not in reality the same name, *Trakhe*, coupled with the title corresponding to **ΣΑΤΡΑΠΕΥΣ**, written in a loose manner.

On the reverse of the coins of the second Hermus (or perhaps the



## Bactrian Coins





## Indo-Iranian coins





third), having a Hercules for reverse, commences another series of native names, forming what we have designated the Kadphises or Kadaphes group. After the change from ΕΡΜΑΙΟΥ on the obverse, to ΚΑΔΦΙΖΟΥ, we have still precisely the same reverse as before, and it is preserved through a numerous series;—the title of mahārāja is not to be found, nor is it easy to see where to commence either the Greek reading ΚΟΒΙΛΑΝ ΚΑΔΦΙΖΟΥ ΧΟΡΩΣ, or the Bactrian, which may be transcribed *dhama . . rata Kufialakana sabashakha* (?) *Kadaphasa*:—in this reading, if we can make out nothing else, there are at the least two names, *Kosula* (also written *Kosula* and *Kosula*), and *Kadphises* (also written *Kadaphes* and *Kadphises*), accounted for. The distinctions on the small coin of ΚΟΠΑΝΟΥ ΖΑΝΟΥ ΚΑΔΦΙΖΟΥ I am unable as yet to make out for want of further samples.

Connected with the same family we then come to the long inscription on the Mokadphises coins, which may be read by comparison of a great many examples:—

*Mahārājasa rñjadhīrāsasa sabahvisha dhārta mahidharasa dhi mahadphīsasa namata.*

<sup>1</sup> Of the great sovereign, the king of kings, both here and everywhere mixing the earth, etc., Mokadphises, the saviour!

I do not insist upon any of these epithets, *sabaha mahidharasa*, for in fact they vary in every specimen. The *dhi* also looks in many coins more like *dha*, quasi *dhara Kadphīsasa*. On some the reading is rather *sabalasa savirāsasa mahidhītasasa* महीधितः sovereign? On some gold coins, again, the name more resembles *sacahina Kadphīsasa*, agreeing with the Greek ΟΟΗΜΟ ΚΑΔΦΙΣΗΣ.

It remains only to apply my theory of the Bactrian alphabet to the inscriptions on the cylinders and stone slabs extracted from the towers at Manikyāla, etc., but this is a task of much more serious difficulty, and one not to be done off-hand, as all the rest has been! I must, therefore, postpone the attempt until I am better prepared with my lemma; and, meantime, I will proceed to describe briefly the contents of

#### PLATE XLIII.

Fig. 1 is a small silver Euthydemus in Capt. Burnes' collection: it resembles exactly the medallions already published of the same prince. Weight, 62 grs. See pl. xxv., vol. iv., fig. 1, 'Journ. As. Soc. Beng.'

Fig. 2 is a hemidrachma of Demetrian also belonging to Captain Burnes. See one figured from General Ventura's collection, pl. xlii., fig. 2.

Fig. 3, a silver coin of Antialcidas, presented to me by General Ventura. Execution very good. Weight 10½ grains.

Obverse:—ΒΑΣΙΛΕΥΣ ΝΙΚΗΦΟΡΟΥ ΑΝΤΙΑΛΚΙΔΟΥ. Head of the king with a flat helmet shaped like a cocked hat:—chlamys on the shoulders, and diadem seen under the hat.

Reverse:—Bactrian legend, *Mahārājasa rñjadhīrāsasa Antialkidasa*. Jupiter

seated holding a small figure of victory—at his feet to the right, the forepart of a small elephant with trunk elevated. Monogram on the left composed of P and <sup>1</sup>.

Fig. 4, a similar drachma of Lysias, belonging to General Ventura: unique.

OBVERSE:—BAZIAEΩZ ANIKHTOT AYHIOY. Head of the king, with the Demetrius helmet, shaped like an elephant's head.

REVERSE:—Bactrian legend, *Mahārājasa apavahataṣa Itāṣa*. (The copper square pieces have *Litāṣa*). Herakles naked standing, with club and lionskin, as on the coins of Demetrius.

Figs. 5, 6. Two varieties of Menander, not yet depicted in the journal, given to me by General Ventura, who has many of a similar nature. In one the prince wears a handsome helmet, in the other he has the simple diadem. The reverse of both agrees with the one engraved in pl. xiv., fig. 1, except that Minerva looks in the contrary direction.

#### HELIOCLÉS, KING OF BACTRIA.

Fig. 7. The first coin of Helioclés which I have yet seen in India. It belongs to General Ventura. A square copper or bronze piece in excellent preservation.

OBVERSE:—BAZIAEΩZ AIKAIOT MAIOKAEOYZ. Diadem'd head of the 'just king, Helioclés,' somewhat similar in features to Eucratides.

REVERSE. Bactrian legend, *Mahārājasa dharmasa Itipakṣayasa*; <sup>2</sup> an elephant equipped with howdah and trappings walking to the right; monogram Z.

Fig. 8. A less perfect coin of the same king presented by the General to myself.

In lieu of the head of Helioclés, the obverse bears an elephant, naked, walking to the left, Greek legend as above. The reverse is irretrievably lost.

It is, perhaps, unnecessary here to retract my former doubts of the existence of a Helioclés in the Bactrian dynasty, since they have long been removed by the account of the silver medals in France. We have as yet seen none but these two copper specimens in India, but the probability is that both silver and copper might be found in Bactria proper, to the north of the Hindu Kush or Imans.

An opinion has been started by Mionnet, in opposition to many European numismatists, that Helioclés was no other than Eucratides the second, the parricide. The surname of AIKAIOT, so unsuitable to such a character, he supposes given through fear or adulation, which I agree with M. R. Rochette in thinking too great an anomaly to be allowable: but without seeking to account for this staggering circumstance, we can now help M. Mionnet to a very powerful argument in his favour from the unique coin of Dr. Lord described in a former part of this paper, which proves that Eucratides' father was a Helioclés; and we know that it was common to call an eldest son by his grand-

<sup>1</sup> N.B. The etching of this coin is a total failure: the plate was laid by for several months and the acid would then barely touch it. In retracing it, the native engraver has quite wandered from my original, and I perceive it too late for alteration on more than half the edition of the plate.

<sup>2</sup> The ante-penultimate letter might be better read *Sra*, or *Sri*: which would give a Sanskrit version of the name,—*Itipakṣayasa*, 'having a sun-like prosperity.'

father's name, as is, indeed, universally the custom to the present day both in Eastern and Western countries.

Fig. 9. I have introduced this duplicate of the single mutilated coin depicted in fig. 8, pl. xv., among the then doubtful group, because General Ventura's present specimen exhibits the name in the Bactrian,  $\text{PA}^2$  *spare*, and thus proves it to belong to the abundant series of *AZEN* coins.

Fig. 10 is a square copper coin of *Lysias* kindly added to my cabinet by General Ventura.

It is in better preservation than any before published.

Obverse:— $\text{BAZIARGZ ANIKHTOT AYXIOY}$ . Head of *Lysias*, with diadem. Mionnet says of a similar coin, 'représenté en Hercule, le massue sur l'épaule gauche'—but I do not perceive these characteristics very distinctly.

Reverse:—Bactrian legend, *Mahdrujan apardatara Baktuan*, 'of the unconquered king *Baktia*.'

I perceive that both Mionnet and M. Raoul Rochette give to *Lysias* the square coins of Spalyrice or Spalermos; though there is no resemblance whatever between them. M. Raoul Rochette writes in the 'Journal des Savants,' Mars, 1836, p. 136:—

'Cette autre médaille de *Lysias* diffère sous tous les rapports de celles que nous possédions déjà du même prince: elle est restée inconnue,<sup>1</sup> à tous les savants et voyageurs Anglois qui, depuis plusieurs années se sont appliqués avec un zèle et une assiduité à recueillir ces précieuses monnaies de la civilisation Grecque enfouies dans le sol de l'Inde: et l'exemplaire que nous devons à M. le général Allard, et que je publie, est encore unique. La fabrication, qui ressemble à celle de la médaille du roi anonyme, que j'ai fait connaître,<sup>2</sup> accuse sensiblement une époque de décadence, d'accord avec la forme carrée du  $\Sigma$  et de l' $\Omega$  qui commencent à paraître sur la monnaie des Arsacides, à partir du Phraate III. à une époque qui doit s'éloigner bien peu de l'âge de notre *Lysias*. On pourrait voir un autre rapport entre cette monnaie Bactrienne et les médailles du même prince Arsacide, dans le titre de juste,  $\Delta\text{IKAIOT}$ , qui se lit habituellement sur les médailles du Phraate III. . . . mais ce qui constitue ici la particularité la plus remarquable et la plus neuve, c'est la qualification d'Adelphe,  $\text{AAEPAOT}$ , affectée par *Lysias*, &c.'

When the mistake of attributing this coin to the wrong person is corrected, it is curious how perfectly the observations of the learned antiquarian of Paris confirm the conjecture to which I have been led by the deciphering of the Bactrian legend:—the coin is that of the 'son of a king Spalahara or Balahara;' in bearing the effigy of Hercules it agrees with the corrupted coins of *Hermæus II.* and others

<sup>1</sup> The drawing of the very coin described by M. H. B. was published by myself in June, 1835, but I did not deem the name legible, nor has it proved so at Paris, by their making *Lysias* out of *Spalermos*. I stated my reason for not publishing earlier to be, that I might not forestall the 'Ac. Soc. of Paris' in describing General Ventura's splendid collection.

<sup>2</sup> It is not obvious in what this great resemblance consists:—one coin is square, the other round:—one has a Greek legend only; the other a bilingual one—the equestrian figure is the obverse in one, the reverse in the other. The anonymous coin was first published in the 'Asiatic Researches' in 1831, and in the *Journal* for 1833 and 1834.



of the Pherras or Phrahetasa (Phraotes?) type, which appear to belong to one family. M. R. R. agrees with our discoverer Masson in locating them in an Indo-Greek dynasty at Nyss, or near Jelálábád, where their coins are found in the greatest abundance.

I have introduced an engraving of a very perfect specimen of this coin given to me by Mr. Trevelyan, who got it from Mohan Lál, as fig. 3 of pl. xlii.

It may be remembered that the name of Vonones is not found on the Bactrian side of his coins, but a totally different word, **𑀧𑀸𑀓𑀭𑀺𑀢𑀺** *Balaharasa* as I read it, or perhaps *Baláharasa* (**बलहरसा**), the patron of champions, a term nearly equivalent to 'Satrap.' Now on all the coins of Spalyrices (or Spalurnes) hitherto found, the initial letter has been unfortunately cut off; but the three next are *lahára*, the same as above, wanting only the final genitive inflection: the next letters may be read *putasa*, for (**पुत्रस्य**) 'of the son.' Putting the whole together we have (*3, Ba*) *laharaputasa dharmikasa Balafaramasa*, 'of Balafarama (either for Balaparama, or **बलधर्म**, whose strength is his armour) the just, the son of Baláhara.' Therefore, as he was brother of the contemporary of Vonones, 'the then king' must also have been a son of the same person: and we should expect to find another coin of a somewhat similar type struck by him. These conditions are satisfactorily combined in the rude square coin of Spalirices, depicted in pl. xv, and pl. xxviii, fig. 7. He has the same flowing mantle from the shoulders, the sceptre of royalty, and his native name appears to be Balirishasa: thus the father's native name is Baláhara; the eldest son's Balirisha, and the second son's Balavarma, and the copper money of the whole triad is distinguished for its exceeding rotundness no less than its conformability of type! The silver money of Spalurnes and Spalirices has not yet been found, or we might probably find that it maintained the name of Vonones, the Parthian king, or his successor, on the obverse.

The style of these three names commencing with Bal,—and the title in particular of the first, Baláhara,—call to mind the Balháru dynasty of north-western India, of which the epoch cannot be said to be yet well defined. One of the earliest foreign authorities, the historian Masoudi, who wrote in 947 A.D., says:—'The dynasty of Phoor, who was overcome by Alexander, (had) lasted 140 years: then came that of Dabschelim, which lasted 120 years: that of Yalith was next, and lasted 80 years, some say 130. The next dynasty was that of Courou: it lasted 120 years. Then the Indians divided and formed several kingdoms; there was a king in the country of Sind; one at Kanauj; another in Kashmir; and a fourth in the city of Mankir

(Minnagara ?) called also the great Houza, and the prince who reigned there had the title of Balhâra.<sup>1</sup>

$120 + 80 + 120 = 320$  years, estimated from Alexander's time, brings us to a.c. 3, or, allowing a few more years to Porus, say 10 or 20 A.D. Now, the reign of Vonones I. as king of Parthia is dated by Vaillant from A.D. 6 to A.D. 20, so that the accordance of time is here perfect, and we need seek no other explanation of the paramount Persian sovereign's name and effigy on one side, while the other modestly bore that of his tributary, because we have witnessed the same in the Satrap coins of Surâshtra. The native kings were apparently allowed to have the copper coin to themselves. The religion here, however, is polytheistic, the effigy that of Hercules or Baladeva.

Without insisting upon their being the same person, I cannot help mentioning that the name of Balarishi is found as one of four brothers by different mothers, who cut a conspicuous figure in Indian fable. Balarishi, Vikramarka, Bali, and Bhartihari; the second of these is the celebrated Vikramâditya, whose reign falls 56 years before Christ, and he was the son of one Gandha-rupa, or, as the fable has it, of a *gandharva*, in the mortal disguise of an asc. Wilford interprets the tale by making Vikramâditya the son of Bahram Gor of Persia by an Indian princess, and, to account for the anachronism of 400 years, is forced to imagine there were several kings of the same name,—which would be likely enough if he admitted (as seems certain from our coins) that Vikramâditya is a mere title. We shall presently allude again to this circumstance.

Fig. 11. From General Ventura's collection. A more perfect specimen of a hitherto illegible coin. It is now seen to belong to Mayes.

Obverse:—BAIHAETI BAIHARIN METAAOT MATOT. Front figure of the king seated on a chair or throne, a shawl (?) on his shoulders, and a club or knotted sceptre in his right hand like that given to Meksôphios.

Reverse:—Much worn and indistinct, a female holding some object like a pearl with both hands, and having a flowing robe behind, like that of the Vonones group. Bactrian legend, *spjashdhrayasa mahatasa mayasa*, and on the field  $\omega\lambda$  used numerically (?).

The discovery of this rare specimen, only the third known of the prince whose name it bears,<sup>2</sup> will be highly gratifying to the numismatists of Paris. It will, in the first place, remove the doubt entertained by M. Raoul Rochette himself whether the un-Greek appellation Mayes might not be used for *Mao*, 'the moon,' as a divinity and not as a king; or whether, united to the title BAIHAETI, the compound may

<sup>1</sup> Wilford's Essay, 'Asiatic Researches,' ix., 181.

<sup>2</sup> I have just received another Mayes of different type from Capt. Burnes too late for insertion here.—J.P.

not be equivalent to the name of Apollodotus: 'ce n'est là, du reste, qu'une conjecture que je soumets avec beaucoup de défiance aux lumières de nos philologues indianistes, auxquels seuls il est permis d'espérer la solution de ce curieux problème.'

The problem is now solved so far that we find him an earthly sovereign with similar titles to those of Ases,—and that he is not Apollodotus! The native name, composed of three letters, I should have formerly read MAO, but on the new, and I think correct, system now adopted, it must be read *Mā-asa* or *Mayasa*, as near an approach to the Greek, or by the Greek to it, as the relative alphabets would allow. Of the name itself, I am inclined to identify it neither with *Māia*, the mother of Mercury (though the caduceus favors this idea, and the Indian *Māyā* is also the mother of Buddha), nor with *Mao*, as luxury,—though Chandra is a common name enough,—but rather with *Māyu* (मायुराजः), the son of Kuvira, the god of riches (whose name also is frequently adopted by princes),<sup>1</sup> and it may have been borne by a contemporary or successor of Apollodotus, who swayed the sceptre but a short period in some part of the Panjāb, if it is necessary to suppose them of the same age.

#### PHILOXENOS.

Fig. 12. A square copper coin in most respects agreeing with the former one, also of General Vanturi's collection, but having apparently a difference in the orthography of the Bactrian name. On comparing the drawing of the silver Philoxenos in the 'Journal des Savans,' with the rapid sketch I had taken of the same coin while in Calcutta, I perceive that I read the name and title wrong; which is my reason for inserting this better preserved coin:—the legend is clearly *maharajasa apaxitaxasa phlaxinasa* (or *Phlaxinasa*). On the silver coin the epithet is *apaxitaxasa* (quasi अपविहसस) —not to be laughed at! but I think the *s* must be a blunder.

M. Raoul Rochette judges from the military aspect of Philoxenos that he was a satrap placed with a regal title on the north frontier of the Bactrian kingdom when threatened by the Scythians; but the circumstance of none of his coins having been found by Maason in the upper field, while several have come to light in the Panjāb, would tend to contradict this hypothesis, as much as the *Ceres Carpophora*, or abundance personified, and humped bull of his copper coin. This learned critic does not allow that the brahmany bull has any reference to India, because it is seen on the Seleucidan coins; but in the only specimen I have in my cabinet of a Seleucus with a bull reverse, the animal is altogether of the European breed.

<sup>1</sup> See notes on the Allahābād inscription, Nov. 1837, p. 973.—*Paśāba Ugrasena, devardaktra Kuvira*. As the Parthian kings were styled *devarajants*, this country of the devas may have been in the north, as was indeed the fabulous country of Kuvira, the god-king.

## COINS OF THE ARS GROUP.

A great deal remains to be done ere we shall be able to clear the history of this numerous and interesting series of coins. Every day new types and varieties spring up, generally of tinned copper or bronze.

Fig. 13 is a specimen in good relief lately sent down to me by General Allard; there was another in the collection sent home by General Court under care of M. Meifredy, of which I was favored with the sight of the drawing. On this the name on the Greek side was entire, and thence I am enabled to complete my description.

Obverse:—BACIAΣΩC BACIAΣΩN MHTAAY VNΔOΦEΠPOV,—rtja is a brahmanical dress, upper part of the body naked,—on the head a turban (?) with flowing fillets. The small figure of victory holding a chaplet over him forms the peculiarity of the device, of which there are yet but three examples. The monogram, which was before as unintelligible to us, I now recognise as a combination of two letters of the old Sanskrit alphabet, *ṣ* and *ṣ*, *ṣ* and *ṣ*.<sup>1</sup>

Reverse:—Whether the figure in a brahmanical costume, holding a trident in the right hand and a palm branch in the left, is Neptune, Siva, the river Indus, or the king, I am not sufficiently initiated in the art to determine. No two reverses seem to be exactly alike, though formed of the same materials; the legend on the present in Bactrian is

*Maharajasa rajarajasa mandataia jagadharasa (?) Farkataia.*

I do not pretend to be satisfied with the last epithet, nor with the name, which, however, I collate with M. Court's. I have conceived it possible, on a former occasion, that it referred to Phraohates, the predecessor of Vonones, or another of the same name: but there are too many uncertain letters in it to build theories safely upon. At any rate, the same name of five letters, here seen below the figure of Siva, is found on all the rude coins ascribed formerly to *Unad* (now corrected to) *Undo-pharres*, with exception of the penultimate letter, which is there always formed like an *f*. *Fars-rtja* (*f*), to which *mandataia* (*soteros*) is invariably added—on M. Court's coin this epithet may be preferably read *ṣṣṣṣṣ* great!

On the area are two Bactrian letters, which might be profanely taken for 'six shillings' by an uninitiated handler!

Fig. 14. A variety of the same group, in General Ventura's recent collection. In this the horseman looks in the opposite direction, and the beginning of the name *ṣṣṣṣṣ* is visible. The monogram is composed of *ṣ* and *ṣ*,—*ṣṣ*.

On the reverse, a well clad female holding still the trident (though it looks more like the cross) walks to the left—a Greek and a Bactrian monogram on either side, of complex form: legend as before, the name below.

Fig. 15. Another novelty from General Ventura's store, of which a duplicate has been sent to France by M. Court.

In all respects but the name the obverse corresponds with the foregoing. The

<sup>1</sup> I may here note that fig. 14, pl. xxxii., is also a coin of *Farkata*, with the letters *ṣṣ* as a central symbol.

name in the two coins yet brought to light of this species is quite distinctly  $\Gamma\Omega\Delta\Theta\Phi\Lambda\Phi\Upsilon$ , which is either another member of the family or a corruption of the last.

The erect front-faced figure on the reverse is dressed in the Hindu dhoti, and extends his hands over a new symbol of gridiron fashion—in his left hand is the trident. This figure has been conventionally styled 'Siva,' when he appears with his bull on the Indo-Scythic coins. The native name is as before, *Paraklata*, with the addition of *satakhana*, 'the bearer of something not very intelligible, unless we make the first syllable  $\Lambda\Gamma$  *jaya*, 'victory.'

Referring to the observations in a preceding page about the brothers of Vikramāditya, I cannot forbear mentioning that in Gondophares we might almost recognise the father of Vikramāditya himself; for in the word *Gondophares* we have a signification not very remote from *Gandha-rupa*;  $\phi\alpha\phi\alpha\varsigma$  being *pallium*, *vestis exterior*,—the compound may mean 'having a cloak made of the skin of the *gandha*, *gonda*, *gor*, or wild ass.' Whence may have originated the fable of the Parthian king doomed to assume the guise of an ass during the day.

These are speculations certainly much in the Wilford strain, but the curious coincidence in so many names is enough to lead even a matter of fact man aside from the justifiable deductions of sober reason.

Fig. 16, like the last, adds a new name to the Bactrian list. The coin, a thick copper piece in tolerable preservation, was sent down to me by General Allard a short time ago; it is as yet, I believe, unique.

Obverse:—(*Bactrian* *Bactrian* *script*)  $\Delta\Delta\Delta\Delta\Delta\Delta\Delta\Delta\Delta\Delta$ —'of the great king of kings, Aboganes'; there may, perhaps, be another letter before the  $\Delta$ . The king, known by the flowing fillets of his diadem, seems dressed in a petticoat, *rīja* fashion—and he sits sideways on a richly caparioned horse, looking to the right. Monogram  $\mathfrak{H}$  as before, but with the Bactrian letter  $\eta$  beneath it.

Reverse:—The same royal personage (by the fillets) as if performing the functions of high priest. The dress is so precisely Indian, that I feel disappointed in not finding a regular Sanskrit name below; nor can I produce much of accordance between the Bactrian and Greek names—the letters are  $\alpha\beta\alpha\delta\alpha\phi\alpha\alpha$ . On the field are various insulated alphabetic symbols,—Bactrian and Greek, and, under the latter, one which looks like a modern Nagari  $\alpha$ ,  $\mathfrak{A}$ , but is more probably a Bactrian letter.

The last figure in the plate (from General Ventura's store) is a duplicate of the *Asus* coin published as fig. 22 of pl. xvii. Between the two one important fact is established, namely, that at this period of the *Asus* dynasty the use of the Greek was entirely lost, while the native character was written with greater correctness in the same or rather the inverse ratio. The Greek legend is a mere jumble of letters, but the Bactrian reads continuously—

*Maharajasa mahatasa dharmikasa vijayirajasa Asasa,*

'Of the great king, the mighty, the just, the king of kings, *Asus*.'

The figure of Abundance with her cornucopia has a compound symbol on the left, which might be read  $\mathfrak{H}\phi$ , her Indian name; and on the right the two letters  $\eta$ ,  $\mathfrak{S}$ , *Asa* and *sha*, used numerically. (*F*)

The perfect Greek medals of Bactria proper, however beautiful as works of art, ought not to turn away our attention from these corrupted or 'barbarous' specimens which mark the decadence of Greek dominion and Greek skill. These are the most precious to the student of Indian history: through their native legend he may yet hope to throw light on the obscure age of Vikramāditya, and the Scythian successors of the Greeks on the north of India. Hitherto these classes of rude coins, though very numerous, have been much disregarded, and on that account I now invite attention to them, and promise to return to the task myself when I have fresh materials collected and arranged; my text being, 'these coins on which the native and Greek legends differ, or record different names.'

[ Following out the plan I have adopted on previous occasions, of combining the substance of Prinsep's discoveries with a general outline of the present state of our knowledge of the various subjects embraced under each heading, I subjoin—

1st. A revised plate (xi.), and a cursory letter-press review of the Bactrian alphabet, as elucidated by the latest available evidence, and illustrated by a valuable comparative table of the transitions of the early Semitic Alphabets, furnished me by M. le Duc de Luyne (pls. xi.<sup>a</sup> xi.<sup>b</sup>).

2nd. A brief introductory notice of the Arian nomenclature, and the parallel transcription and translation of the Greek names and titles occurring on the coins.

3rd. An abstract of the leading theories for the epochal and serial distribution of the list of monarchs adopted severally by the authors who have specially devoted themselves to the study so effectively insugurated by Prinsep.

4th, and finally, I annex an outline but numerically comprehensive catalogue of all the Bactrian coins I have had an opportunity of examining, together with references to the various publications wherein the more important pieces may chance to have been figured and described at large; further, to improve, as far as possible, the general series, I have added such examples as I felt myself justified in citing from Major



Cunningham's inedited plates;<sup>1</sup> and, to complete the typical details, I have compiled from the coins themselves a table of mint monograms (pls. xi.<sup>o</sup> xi.<sup>o</sup>), which I trust will be found to afford a full and exact summary of these important records.

# I.—REVIEW OF THE BACTRIAN ALPHABET.

Whatever of modifications or discrepancies of form may be apparent in the Bactrian character, as opposed to the Semitic alphabets of the West of parallel date, there can be but one conclusion as to their joint derivation from a single parent stem. It would be absurd to suppose that the Phœnician and its cognate ramifications curtailed and yet complicated into the crude signs of their own system the more copious and advanced alphabetical series of the East. Indeed, there is internal evidence to the contrary, and the process of simplification of certain characters by the latter can be traced and detected in the mere mechanical configurations alone, and otherwise most of the changes and adaptations of the Arian scheme can be explained and accounted for by the double action of the needful increase in the total number of letters, and the effect of contact with the independently perfected alphabet of India proper.

The proofs of the common origin of the two styles of writing are to be found in the direction followed by both—from right to left,—in the leading idea of the construction of the majority of the characters of either, and, more definitively, in the approximation and close unity, in each series of the several forms of **𐎧**, **𐎦** [**𐎦**], **𐎥**, and **𐎦**.

<sup>1</sup> [It is perhaps necessary for me to explain more distinctly the reserve I feel called upon to exercise in this regard. Major Cunningham, some years ago, prepared and printed off a series of eighteen plates of Bactrian coins, designed for the ultimate illustration of his long contemplated work on 'The Successors of Alexander in the East.' These lithographs were most obligingly communicated to myself, and others interested in cognate studies in anticipation of the due order of publication. They contain facsimiles of many important coins that I should have been glad to have cited to improve the series now given, but as I trust the author will shortly be enabled to make public his elaborated memoir, I ordinarily abstain from anticipating the novelties he has delineated, even under the full acknowledgment appended on the rare occasions that I have quoted from this source.]



In regard to the date of the elaboration of the improved system, it would be vain to speculate with any pretension to accuracy; but it may be safe to say, while adverting to the internal fixity of the Semitic alphabet and the very remote period at which it can be shewn to have been in free use,<sup>1</sup> as well as to the material progress achieved up to that date, that the Bactrians must have separated and organized their system at an era considerably antecedent to a.c. 250,<sup>2</sup> which is the earliest epoch at which any example of their epigraphy can at present be quoted.

Symptoms of such an independent advance may be tested in the fact, that at the period in question, many of those letters of purely Semitic formation, which were retained comparatively intact as representatives of identical phonetic values, are found to exhibit a far more striking approximation towards the ultimately accepted forms of the modern alphabet than their correspondent characters of the Western system in use under the Seleucidae.

<sup>1</sup> [For instance, its having formed the model of the Greek alphabet, which itself is admitted to have been employed in the 9th and 10th centuries a.c. Mure, 'Hist. Greek Lit.' iii., pp. 402, 424, 430, 436. M. E. Renan considers that there is evidence authorizing the inference that the Hebrews wrote in the 'phénico-babylonien' alphabet at the time of the coming out of Egypt. 'Histoire Générale des Langues Sémitiques,' p. 109. Paris, 1855.]

<sup>2</sup> [I am not able to discover upon what precise authority M. Renan extends the spread of Semitism to Bactria at the period indicated in the subjoined extract, but I conclude he associates it in some way with the accession of 'la dynastie (d'origine arienne) qui éleva à un si haut degré, au viii<sup>e</sup> siècle, la puissance de Ninive,' and the subsequent establishment of the kingdom of Babylon.—'Un fait beaucoup plus important que tous ceux qui viennent d'être cités, est la transmission qui se fit, vers le viii<sup>e</sup> siècle avant notre ère, de l'alphabet sémitique à tous les peuples du monde ancien, par l'action combinée de la Phénicie et de Babylone. Borné sur toutes les côtes de la Méditerranée jusqu'en Espagne,\* porté vers le Midi jusqu'au fond de l'Éthiopie, gagnant vers l'Orient jusqu'en Persépolis, l'alphabet sémitique fut adopté spontanément par tous les peuples qui le connurent;' p. 195, 'Hist. Gen.']

\* L'alphabet phénicien était devenu, sous diverses formes, l'alphabet commun de tous les peuples méditerranéens, avant d'être remplacé par l'alphabet grec et par l'alphabet latin, c'est-à-dire par deux transformations de lui-même. Dans le monument de Téos, déjà cité, l'expression *ῥά φωνήεντα* (i.e. *ῥά φωνήεντα*) désigne le texte même de l'inscription.

<sup>3</sup> L'alphabet zend paraît se rattacher aux alphabets araméens. Quant au dévanagari, son origine sémitique est restée très-douteuse, malgré les efforts de M. Lepsius pour l'établir.

Tracing more closely the internal constitution of this adaptive alphabet, we have to allow—(1) for the creation of nearly double the number of letters previously existing in any known Semitic series, incident to the linguistic demands of a more exact language; (2) for a hitherto-unheeded discrimination between consonants and vowels; and lastly, for that strange anomaly in Semitic writing, the introduction of the medial vowels in the body of, or attached to, the covering consonant, which was calculated so seriously to affect the normal form of the latter.

With these ample materials for comparisons and inductive definitions, it may be said that it should be easy to arrive at the truth; but it must be remembered that the very multitude and conflicting nature of the possible causes creates, in itself, a difficulty in selecting the ruling one. And as has already been remarked, we are not by any means in possession of the whole evidence in the case, but have to decide upon the facts presented to us by three literal series at a given point of their several histories, when each had already arrived at advanced maturity.

However, let the special instances be proven or not, thus much may be conceded on the general issue:—1st, That in the formation of the Bactrian alphabet the leading tendency was to follow Semitic tracings; 2nd, That the normal types of the parent stock were altered, adapted, and even devoted to new purposes, as occasion required, for the due exhibition of the more ample and exact speech they were now called on to embody; and 3rd, That the pre-existing and indigenously-matured Pálí alphabet of the South exercised more or less influence in the ultimate determination of many of the forms, more especially in regard to that extraneous element—the definition of the vocalic sounds.

With this limited preface I introduce the detailed examination of such letters of the entire series as seem to furnish data in support of the results above indicated, otherwise avoiding all

notice of those characters which neither illustrate the general derivative question, nor present any difficulties in regard to their own forms and values.<sup>1</sup>

It will be seen that I follow the order of the Lāt alphabet, as arranged by Prinsep in his early engravings.

1. Regarding the value of the letter *k* in its leading lapidary form, or its numismatic modifications, there has been from the first but little question. Some apparent anomalies, however, present themselves in the way of a ready determination of the prototype from whence the Arian letter derived its outline. The normal configuration of the Semitic *ק*, *Kaph*, seems to have been devoted, in the Bactrian system, to the representation of a new articulation;<sup>2</sup> and the prevailing style of the Phœnician *פ*, *Feth*, was superseded in the Eastern alphabet by the appropriation of an almost identical character as the exponent of *s*. And yet, amid the enigmas of Semitic paleography, it is curious to mark the community of design apparent between the Bactrian *γ* of extreme Eastern maturation and one of the Aramean varieties of the *p* preserved on the monuments of Egypt.<sup>3</sup>

2. The *kā* of the Bactrian system will be seen to have gone through a succession of forms, whether under its numismatic or lapidary progressional course: this is possibly owing to its infrequent use, whereby it retained a less determinate position in the general alphabet. It is found on the coins of—(1) Antiochus; (2) Archénius; and (3) Koxola

<sup>1</sup> [It is needless that I should specify more precisely the nature of the materials whereby I propose to justify my inferences:—1st, In regard to the lapidary characters. The Kapardigiri inscription may be examined in Mr. Norris's most scrupulous mechanical transcript, copied from an inked-cloth impression taken from the rock itself, and published in the 'Journ. Roy. As. Soc.,' vol. xii., p. 153; as an additional verification of the facsimile, I have been able to consult the original calico transfer, in some cases available in duplicate, as well as Mason's own eye-transcript, executed with such obvious care and accuracy on the spot; and, finally, advantage has been taken, in the few possible instances, of the seemingly correct outlines afforded by an indifferent Calcutta lithograph, designed by Mr. J. W. Laidlay, and purporting to have been drawn from a facsimile by Captain A. Cunningham, copied *in situ*.—The Manikyala stone inscription is engraved in pl. ix. of this work, and the entire transcript has been compared and tested anew, from the original—now rectified as to its position on the walls of the Bibliothèque Impériale—since my remarks at p. 125, vol. i., were printed off. The Wardak inscription, which may be classed with the monumental rather than with the numismatic section of paleography, is reproduced in pl. x., and the urn itself is before me for reference. The numismatic characters are necessarily gathered from diverse sources, which it would be tedious to expose at large. It may be sufficient to say that the apparent age of the coins has ruled the order of the several exemplars inserted in the plate of alphabets.]

<sup>2</sup> [*J* or *kā*, *ḳā*/d.]

<sup>3</sup> [See Gesenius, *Carpenter's Inscription*, tab. 4; and type table of Semitic Alphabets *ḳā*/d, series No. 3.]

Kadaphes, in each case in correspondence with the Greek  $\chi$ . Its Kapurdigiri outline is well ascertained, and equally so is its value, as the equivalent of the Pāli  $\chi = \text{𑀭}$ . I have not been able to trace it very positively in the Manikyāla writing, and the form I adopt from the Wardak urn is likewise only conjecturally inserted in virtue of outline similarities. I have also entered in the plate the most prominent of the numismatic varieties, whose originals seem often to exemplify the mere crudities of imperfect engraving; but the letter, as it appears on one of Archelaus' coins,<sup>1</sup> presents a striking peculiarity in the supplementation of a small hook, such as is used to denote the simple  $\chi$ , which would almost seem to indicate an acknowledgment of the necessity of some further means of discriminating a character, in many instances liable to be taken for a  $t$  or an  $r$ . The precise sound of the ancient Semitic  $\text{𐤊}$  *Kheth* (*Hheth* or *Cheth*) is not very well determined; and if it were not for the seeming appropriation of the design of the legitimate Phœnicæo-Babylonian  $\text{𐤊}$  to the representation of the Arian *ek*, it might be possible to refer the origin of the Kapurdigiri guttural to a reduction of the superfluous lines of the Achaemenian  $\text{𐎧}$ , to which stage the complicated figure of older days had already been brought, and whose unchanged outline was finally accepted by the Greeks as their aspirate  $\chi$ .

3.  $\Psi = \text{𑀭}$ . This letter, regarding which some doubt at first existed, is now the received exponent of the sound indicated by the characters of the kindred alphabets set against it. The only difficulty connected with it consists in the question which necessarily arises as to what effect the horizontal foot-stroke, occasionally supplemented to its radical form, in common with those of the  $\Psi$   $j$  and  $\chi$   $t$ , may chance to have upon its ordinary phonetic value. The Kapurdigiri Inscription, with a single doubtful exception,<sup>2</sup> leaves the original letter unadded to, and the Manikyāla stone alike abstains from the augmentation. The Steatite urn (pl. vi.) seems to insert the stroke in the one case in the word **𑀭𑀭𑀭𑀭** and to omit it in the second version of the same title.<sup>3</sup> The Wardak Inscription, which, it may

<sup>1</sup> [In the possession of Colonel Abbott.]

<sup>2</sup> [The instance I refer to occurs in the 14th line in the word *pataparaśi*, corresponding with the Gienk Pāli *patthapāraśi*. The first  $p$  has the horizontal foot-stroke, which is clearly to be traced in the cloth impression: it is also entered in Mr. Norris's first copy from that facsimile, but it has been omitted in the lithograph. Masson's eye-copy gives it in full distinctness; and Major Cunningham's transcript fully acknowledges the existence of some such mark, though in the Calcutta lithograph the sign is transformed into an *omacron*.]

<sup>3</sup> [Prinsep, I see, has given it in both cases; but there is no trace of the line on the lid of the vase itself.]

be added, will be seen to contain a striking number of  $\text{𑀧}$ 's in proportion to the rare occurrence of the letter in the cognate inscriptions, must be supposed to insert the sign or its substitute, in the form of a back stroke (easily confounded with the subjoined  $\text{𑀧}$   $r$ ), in the majority of instances, while, in one case, the  $g$  is positively deficient in that or any other subjunctive mark.

For the present, therefore, I am disposed to conclude that this line constitutes a mere optional addition to the simple letter, possibly having its origin in a design more completely to distinguish the  $g$  from some of the literal compounds, with which it was liable to be confounded.

Regarding the origin of the character itself, I should be inclined to attribute its derivation to a semitically outlined and more cursive imitation of the Pāli  $\text{𑀧}$ . The proper  $g$  of the Pāli series, which so nearly corresponded with the Phœnician  $\text{𐤂}$   $g$ , will be seen to have been devoted to other purposes in the organization of the Bactrian alphabet;<sup>1</sup> hence a new form had to be found to represent the functions of the  $g$ , which it is easy to conceive may have been taken from a character of proximate sound in the independent series of the South.

4.  $\text{𑀧} = \text{𑀧}$   $gh$ . The sign for  $gh$  has been noticed and commented upon under its numismatic aspect, at p. 207, vol. i. It remains for me to confirm the true outline of the character from lapidary sources. The  $gh$  is not a letter of very frequent occurrence, so that the possible examples in the whole *Kpurdigiri* Inscription are limited to three. In tablet iv., line 8, the Arian letters that should correspond with the Gīrnār  $\text{𑀧}$ 's in the words *Berigghos* and *Dhammagghos*, are imperfect, both in the original cloth transfer and in Masson's eye-copy. Mr. Norris transcribed them therefore as simple  $g$ 's. However, the recurrence of the letter (tablet xiii., line 5), in its full form, and in due correspondence with the Pāli  $\text{𑀧}$  in the word *Upagghato*, leaves no doubt that the earliest lapidary outline is identical with that employed on coins.<sup>2</sup>


5.  $\text{𑀧}$   $ng$ . Major Cunningham claims, among his other discoveries in the Arian alphabet, to have detected the sign employed to represent this sound. I have had occasion to doubt the finality of this assignment (vol. i., p. 102), and for the present am constrained to leave the Arian column of equivalents of this letter unfilled.

6, 7. I pass by the various forms of  $\text{𑀧}$  and  $\text{𑀧}$ , which are sufficiently assured in their early demonstration, as well as obvious enough

<sup>1</sup> [Y. No. 26.]

<sup>2</sup> [In addition to the proved example of the letter on the Behat coins, it is occasionally met with in monogrammatic combination on the *Asos* series. It also occurs in the last line of the Warhak writing (pl. x.), and in Captain Pearse's copper-plate inscription, 'Jour. As. Soc. Beng.' vol. xxiv. (1855), pl. xv., p. 328.]

in their subordinate gradations, as exhibited in the plate, merely noting with reference to what has already been said on the derivation of the Bactrian *kh*, that the simple form of the Achæmenians and Artaxerxes Longimanus, or their joint prototype, may well be imagined to have furnished the model of the less stiffly-fashioned Bactrian *kh*.

8.  $\eta = \epsilon$  . I proceed to consider the various equivalents of the letter *j*. The Kapurdigiri and Manikyala outlines of the character closely accord with the simple numismatic type, while the dotted inscription on the Wardak vessel develops certain vaguely executed forms, which are scarcely consistent with one another, but which may generally be said to shew a considerable modification of the primary design.

The peculiarities in the numismatic character consist in some cases of an apparent duplication of the letter by the insertion of a second forward limb, and in the nearly uniform addition of the horizontal foot-line noticed as in occasional use in connexion with the normal form of *y*. And in these instances, also, I am almost forced into the conclusion that this extra line was not designed to have any effect upon the articulation of the consonant, as the same word, *Rajadiraiana*, is written alike, with or without the lower lines of the *j*'s (ex. *g*. *Eukratides* and *Kadphes*), though the earlier examples affect the former, while the later<sup>1</sup> return to the monumental outline. In regard to the association of the normal letter with any character of Semitic organization, I may note its near correspondence with some of the secondary forms of the Western *z*, though it is clear, if any such identity is to be admitted, that the sign must be understood to have been appropriated to the expression of a foreign and very different sound in the Eastern system.

9. The definition of the Indian Pâli form of the *jâ* was effected by Prinsep in March, 1838 ('*Jour. As. Soc. Beng.*, vol. vii., p. 272; *supra*, vol. ii., p. 36). As the Kapurdigiri correspondent passages, wherein this letter might have been expected to be met with, were defective in the one place (tablet vi., line 7), and differently cut in the other (tablet xiv., line 2), the Arian configuration of the character has hitherto remained undetermined. The authority for the present assignment rests therefore solely upon the legends on the coins of Zolus, where the letter copied in the plate is found as the representative of the Greek *z* in the king's name. It will be remembered that the Devanâgarî alphabet possesses no equivalent of the letter *z*;

<sup>1</sup> [Some of the *Azes* coins so far modify the shape of this adjunct as to give it a merely forward direction from the base of the letter, in seeming conformity with the parallel simplification noticed under the letter *y*, p. 149.]



and although modern practice, under the necessities of the adaptations of a foreign tongue, may often substitute the simple  $\aleph$  for the Arabic  $j$ , this constitutes no obstacle to the free acceptance of the above identification. The Greek  $\alpha$ , it may be noted, is rendered in Arian by the letter  $\tau = \text{S}$  (see Philoxenes). In this instance, as in those about to be noticed under Nos. 11 and 12, a difficulty arises as to whether the simple letter or its aspirate should be accepted as the more direct derivative from the parent alphabet. Gesenius' early forms of the Semitic  $\aleph$  *Capā*, as well as the leading column of the Duo de Luynes' alphabets, would favor the claims of the latter, while the Achaemenian and other proximate reproductions of the same letter approach more nearly to the linear rudiments of the former.

10. The Arian letter, answering to  $\aleph$ , seems to have been primarily deduced from a duplication of the upper limb of the ordinary  $\epsilon$  to meet the requirements of due correspondence with the more exact and ample alphabet of the South. Its use in the Kapurdigiri Inscription is not exclusive in its accordance with the Pāli  $\eta$ . It is found in substitution of  $\cdot \mathbf{I} = \aleph$  in *Ārāma* (line 17), and (if the word is not misread) as the equivalent of  $\cdot \mathbf{E} \eta$  (line 3); but where such strange liberties are seen to have been taken with the orthography in other parts of the writing, these departures from the intentional standard need not disturb the recognition of the leading value of the sign.

11, 12. The Arian *cecebrals*,  $\beta$ ,  $\beta^h$ , in their relative configuration, seem to carry out the general idea of the Pāli alphabetical system, which associated the simple letter and its aspirate under more or less community of form, though in this instance the normal character would appear to have been retained for the representation of the aspirate, while the corresponding simple letter was constructed out of its elements by a slight modification in the arrangement of its original lines. The earliest Semitic  $\eta$ , as its name implies,<sup>1</sup> consisted of a simple cross, and in such guise it clearly found its way into the Bactrian literal series. That it should be adapted to the exposition of the Eastern  $\beta^h$ , rather than to that of the simple  $\tau$ , to which the Greeks devoted it, need cause no surprise, as it is clear that  $\beta^h$  (as in 'Aink') was the primary and preferable equivalent of its sound, notwithstanding that the second and more dubiously aspirated  $t$ ,  $\eta$  *teth*, which co-existed in its own alphabet, was converted in the Hellenic system into  $\theta$ .

It is curious also to note, in the Kapurdigiri inscription, what may possibly chance to be a parallel simplification of the dental  $t$  out of the complicated lines of the  $\beta^h$  of the same order of consonants; except

<sup>1</sup> [*Cujus nomen (17) signum cruciforme significare constat.* Gesenius, p. 47.]



that, if this derivation is to hold good, the supposition of the conversion of the Semitic  $\gamma$  into the former letter must fall through, and to the cerebral  $gk$  of the Bactrian scheme must be conceded the title of inheritance of the alphabetical outline of the Phœnician *Daleth*. Though, in this case, as the primary form of the original Semitic is *teth*, like its derivative denomination, is indeterminate, and the Bactrian adaptation is equally uncertain in its point of departure, it will, perhaps, be preferable to adhere to the definition which supposes a construction of the simple  $\gamma = \xi$ , in unison with the parallel development of  $\alpha$  &  $\gamma$ , from the nearly identical rudiments of the simple letters of the earlier series, and consequently to regard the adaptive dental  $tk$  as a linear improvement upon the tortuous form of the Western alphabets, and as based in one portion of its configuration at least, upon the modified representative of its own simple letter.

13. The  $\eta$  is an alphabetical sign of limited use; but it is of consequence correctly to determine its normal form, with a view to the illustration of the history of the associate characters of approximate sound, and the determination of the progressive modifications of the letter itself. Its positive shape in its monumental expression is sufficiently defined (as given in the plate)<sup>1</sup> by the Kopardigiri Inscription. It would seem to retain its original outline in the Manikyāla writing, and is frequent amid the coin legends, though strange to say, in these instances it never occurs in its full and definite development as an isolated and uncombined letter, but only appears in its true shape in composition with the vowel  $\bar{i}$ , to receive which its side limb has to be considerably prolonged: hence a question arises as to whether the radical configuration of the character was not subjected to a modified design in its ordinary expression as a simple letter; as such, it may possibly have furnished the model for the sign usually exhibited as  $\eta$ ; and it is clear that the resulting elongation of the upper line and the rounding off of the angular turning point might easily occur in the ordinary degradation of the character. And this suggestion brings me once more to face an acknowledged difficulty,—the intent and meaning of the horizontal foot-stroke attached. Hitherto I have had to deal with letters that derived little or no advantage from this supplementation; now a new light seems to break upon the subject, and it would almost appear that the foot-line in this case, like the Parthian semicircular dot of *Naksh-i-Rustam*, still extant in the diacritical mark of the Syriac  $\delta$ , was designed to discriminate the  $\delta$ , or at all events to distinguish it from some character

<sup>1</sup> [It is equal to  $\eta$  in tablet iv., line 12, and tablet vii., line 2; but it corresponds with  $\eta$  in tablet vii., line 3, in *eludram*.]

nearly allied in shape but differing in phonetic value. As a general rule (for there are few exclusively consistent ones in this series), the character used to express *d* is individualized by the cross-stroke, while the almost identically-formed *t*'s and *r*'s are preferentially left unmarked.<sup>1</sup> The value of the letter  $\gamma$  as *d*, whether doing duty as cerebral or dental, is proved by its alternation and interchange with the true dental  $\delta$  in the antepenultimate in the name of Apollodotus, and in the titles *Tradatasa* and *Rajadīraj*. So that, whether we accept it as a derivative from the old  $\eta = \text{𐎧}$ ,<sup>2</sup> or as an ordinary  $\gamma = \text{𐎦}$   $\delta$ , adapted to a modified articulation, its reciprocal value remains much the same.

14. The cerebral  $\delta$  is not a letter in frequent requirement, and though the Arian equivalent is freely developed in the lengthened edict of Kapurdigiri, it need cause no surprise that it should not have been met with amid the brief legends on the coins, especially when it is seen how little discrimination was made between simple letters and aspirates, and what scant scruple was exercised by the die-engravers in the interchange of one *d* for another, or the more vague substitution of *t*'s in place of *d*'s.

15. The cerebral  $\eta$  well retains its original Kapurdigiri<sup>3</sup> identity in the later Manikyāla lapidary writing, and on the engraved silver disc from the same locality. Among the modified letters of the Wardak inscription it is more difficult to determine its correct correspondent; for, if we are to follow the Manikyāla inscription, the ordinary  $\text{𐎧}$  has now become  $\rho$ , which form duly appears on the brass vessel; but the  $\text{𐎧}$  is here so far changed as in some cases almost to look like a return to the model of the early  $\delta = \text{𐎧}$  of the Kapurdigiri legends.

16. The  $\gamma = \lambda \text{ 𐎦}$  is a letter which admits of but little question, from its first appearance on Asoka's monumental edict to its latest use upon coins. Its form is of importance under the comparative palaeographical aspect, in that it assimilates so closely in its simple outline to the nearly homophonous Hebrew  $\gamma$  *d* of modern days, thus exhibiting the more speedy advance towards maturity of the Eastern system in contrast to that of the West, whose expression of the letter in 250 a.c. had in most instances diverged but little from the primitive sign.

<sup>1</sup> [Ex. gr. *Enkrutiasas*. *Tradatasa*. Some of Apollodotus' coins mark the penultimate  $\delta$ , but in the better executed specimens the foot-stroke appears as an  $\text{𐎧}$ . See note on that name in the Coin Catalogue.]

<sup>2</sup> [Among other inconveniences of imperfect type, it will be seen that I am compelled to use the same sign for  $\delta$  and  $\eta$ . The real difference between the two is properly discriminated in the plate.]

<sup>3</sup> [Coins of Asoka, *et. sup.* 'Wardak,' i, p. 163.]

<sup>4</sup> [Precision in the use of this  $\text{𐎧}$  seems to have been as little regarded as in other cases already noticed. Ex. gr.  $\zeta = \text{𐎧}$  usually.  $\zeta = \text{𐎧}$ , 4, 9.]

17. The letter *dh*, in its early lapidary development, likewise admits of but little cavil; but it is doubtful whether its form is to be detected amid any of the inscriptions or coin-legends subsequent to its proved appearance on the Kapardigiri rock. Its derivation, as well as that of its fellow *h*, has been already commented on in association with Nos. 11 and 12.

18.  $\text{ḥ} = \text{ḥ}$ . Regarding the letter *ḥ* in its isolated aspect but little need be said; its absolute identity, in the earliest form of which we have knowledge, with the ordinary  $\text{ḥ} = \text{ḥ}$  of the same alphabet, is singular, and often proves inconvenient. It appears to be but little changed in the process of time intervening between the endorsement of Asoka's edicts and the engraving of the Manikyāla stone, though the associate  $\text{ḥ}$  in the latter writing seems to have been considerably modified from the old type. On the ruins, this *ḥ* remains but little varied, either under the provincial or ordinary provincial influence. I have still to speak of the subjunction of the horizontal foot-stroke. If the theory be sound that this adjunct is attached to *ḥ*'s and other special letters, and is never supplemented to the *ḥ*'s,<sup>1</sup> then the second letter of the ordinary form of the name of Menander must be read as a *ḥ*, which is certainly opposed to the probabilities of orthographical transliteration. If there were any authority for so doing, I should prefer to interpret the single compound as *naḥ*, assuming the foot-mark to be a mere simplification of the arrow-pointed *ḥ* of the Kapardigiri system; but here, again, difficulties present themselves, as the sign can scarcely be uniformly accepted as the mark of *ḥ*, and indeed as a suffix to the *ḥ*'s and  $\text{ḥ}$  *ḥ*'s, it affects another form. It would still be possible to infer that the discriminating sign of the *ḥ* here supplemented to *ḥ* might stand for the duplication of the succeeding *ḥ*, in accord with Pāli requirements of orthographical expression; but I should be sorry to propose so hazardous a conjecture without more definite and positive evidence than I am yet in possession of. To dispose of the succeeding letter in Menander's name, under this, its proper heading, I may note that the character hitherto received as *n*, appears, from an examination of the best specimens of the multitudinous hemidrachmas of this sovereign, to be a combination of the equivalents of *dh*.

19.  $\text{ḥ} = \text{ḥ}$ . The definition of this letter is well ascertained,

<sup>1</sup> [Certainly this latter rule seems to hold good, with the single exception, if such it be, here noted. I have nowhere else succeeded in finding a pointed *n*.]

<sup>2</sup> [For a long time the Parthian *dh* was supposed to be represented by an outline similar to the above. The correct form is given in the plate, under 7. (See 'Jour. Roy. As. Soc.' vol. x., p. 118; vol. xii., p. 264.)]

and its outline undergoes but little change throughout the entire period represented by the various Arian writings antiquarians have as yet been able to assemble for scrutiny and comparison. I notice it in this place merely for the purpose of drawing attention to the curious coincidence of its form with *hat* of the Achaemenian letter (522 to 456 a.c.), entered in the Phœnician series of the Duc de Luynes as the equivalent of the *ʿ* *Thade*. This outline, it will be seen, departs notably from the ordinary run of the derivations from the old *Thade*; and hence a question might arise as to whether the exceptional letter may not have been borrowed from the independently matured Bactrian series to represent a sound not very dissimilar to its own, but whose precise articulation did not exist in the Arian system.

20. *ḡ* = *ḡ* *ḡ*. The Kapardigiri *ḡ* of manifest Semitic derivation, which here had to represent the sound of *ḡ* or *ḡ* at will, seems to have preserved its, to us, normal form on the early coins of the Greek monarchs. Menander, at least, uses it in near parallelism with its counterpart *ḡ*, and Philoxenes places its import as *ḡ* beyond a shadow of a doubt, by inserting it as the penultimate letter of his own designation. The character, however, was soon doomed to modification, whether on account of the objection to one symbol having to represent two diverse sounds, we need not stop to inquire; but on the hemidrachmus of Dionysius the *ḡ* has become little more than a perpendicular line, and stands in strong contrast to the initial *ḡ*, which follows the old model. On the Kadphises' coins (No. xxvi.) the *ḡ* is formed almost like a Greek *ρ* of the obverse legends, and approximates more to the old design of the *ḡ* than to that of the simple *ḡ*. On Kanaka Kadaphes' coins the *ḡ* is figured as a perpendicular line with a single arrow-bath on its top like the letter I have transcribed as *ḡ* from the Manikyāla stone and the Wardak urn; and, finally, on some of the Bactrian Satrap coins the letter appears with the full arrow-point, which may either indicate a modification of the form or value of the character, or may simply imply the addition of a short vowel to the original letter.

21. *P*.—The Arian *p* is a letter which presents no difficulty, either in its original ascertainment or its use in its onward course. But it claims special notice, in companionship with the *l* of the same series, on account of its departure from the standard Phœnician type, in the direction assumed by the indelictive adjunct, which constitutes the very essence of the character. The Semitic *ḡ* is shaped like a Bactrian *ḡ* *a*: that is, the distinguishing curve from the leading down-stroke is turned to the left, while the letter *ḡ* of the former series produces the side curve to the right. In the Arian alphabet both these methods of formation are abandoned in favour of a directly opposite mode of

definition, which strikingly identifies the resulting characters with the corresponding letters of the Pāli. These coincidences may, of course, be purely fortuitous, but, taken with other indications of connexion between the two schemes of alphabetical notation, I am disposed to accept the double evidence as more distinctly evincing a designed change.

22.  $\text{𑀓} = \text{𑀔}$   $\text{𑀕}$ . The  $\text{pā}$ , unlike the  $\text{p}$ , which maintains its integral identity throughout, is subjected to changes and modifications that demand specification. Its Kapardigiri indicator is freely developed, and the original idea of its formation, upon the basis of its own simple letter, may be traced in the additional stroke inserted in the onward course of the writing, beyond the perpendicular line of the parent  $\text{𑀓}$ . In its ordinary written form it is with difficulty discriminated from a  $\text{𑀓}$ , and this chance of confusion may possibly have led to the marked alteration which may be observed during its numismatic course to the  $\text{𑀓}$  of Godophares' money, and again to the  $\text{𑀓}$  of Kadphises' mintages.

23. The Arian  $\text{𑀓}$  is the letter of all others that most intimately identifies its own alphabet with the parallel Semitic offshoot of more Western culture. The derivation from some common parent being admitted in each case, it is curious to mark the independent development of the early Bactrian type of 250 B.C., as opposed to the stationary Phœnician  $\text{𐤓}$  in use under the Seleucids; and, progressing onwards, it is still more strange to note the large amount of derivative identity the Parthian letter of Ardeshir Bābegān holds in common with the Bactrian character of earlier days, as well as the close similarity of the joint resultants more definitively exemplified in the Partho-Bactrian coinage. Further, among the coincidences attending the evolution of alphabetical symbols, it is singular to note a parallel advance towards the most approved modern form of the character achieved *proprio motu* by the Palmyrene writing.<sup>1</sup>

24.  $\text{𑀓} = \text{𑀔}$   $\text{𑀕}$ . The shape of this character is as well defined and equally sustained, as its value is undoubted; but little, therefore, need be said in reference to it. It would, indeed, have been a matter of interest to have traced the possible combination of alphabetical rudiments whence it derived its standard configuration; but, as our starting point for all comparisons consists in an already matured literal series of many centuries growth, it would be useless, in the absence of the more primitive forms, to institute any contrasts based upon materials apparently so largely modified from their primary outlines.

25.  $\text{𑀓} = \text{𑀔}$ . At first sight the Bactrian  $\text{𑀓}$  might be pronounced to

<sup>1</sup> [Gesenius, tab. v., pl. xi. e, and Type Table *infra*.]

have nothing in common with the Semitisms of the Western alphabets; but on examining the question more closely, it seems by no means impossible to conceive that the Eastern product retained in effect a portion of the original elements of the ancient character. The rejection of the superfluous down stroke of the Phœnician *m*, which, as it stood, conflicted with the Arian *ḡ*, would reduce the former letter into the Eastern representative of *m*, and the further necessity of again discriminating the uninflected consonant from this latter combination may reasonably have led to the ultimate simplification of the current form of the *m*, and the reservation of the cross stroke for its own proper purpose, as the sign of the medial vowel *i*.

26. *Λ = 𐎧*. As with the *m*, I was almost on the point of pronouncing against any possible Semitic influence in the formation of the Bactrian *y*; but it is clear that, if the doctrine of intentional simplification of the characters under the needs and requirements of a more perfect language is to be held valid, much of the primary identity of the Phœnician *y* might be traced in the form ultimately adapted to the Arian alphabet: here, again, a rejection of the redundant up-stroke, which in the Eastern scheme constituted the suffix *r*, and the omission of the second down-stroke of the Western palatal, which expressed an *e* in the Arian series, would leave the character very much in the form extant upon the Kapardigiri rock. Though I confess that, knowing as I do how much mere mechanical comparisons of forms, under imperfect data, are liable to mislead, I am unwilling to press such arguments, or to claim more than a possible association of minor coincidences, where the broad question is supported by such definite evidence.

27. *𐎡 = 𐎢*. The letter *r* of the Bactrian series, as found in the monuments of *a.c.* 250, is of high importance in proving at how much earlier a date it had become developed into the since dominant Hebrew form than the same character of the cognate alphabets of the West. That it is fundamentally the same letter in both may easily be conceded; and the manner in which the nearly fellow character, the *t* of one series, the *d* of the other, advanced into maturity, is likewise striking. The same may be said of the *𐎡 = 𐎢* of the Bactrian and the *𐎡* *aww* of the Western scheme. As a simple letter, the standard *r* remains but little changed. In combination, however, like the *anuswāra* of the Bactrian system, it presents difficulties from the innate obstacles to the conjunction of the literal forms of Semitic alphabets, which, even under the necessities of Arian speech, seem to have progressed but slowly, and by imperfect rules, in this direction. The small back stroke at the foot of the covering consonant clearly



stands for the letter *r*; but it is a question whether the act of subjunction invariably implied the suppression of the short sound of *a* inherent in the leading consonant; and supposing such to be the ordinary intent and purport of the act of combination, it is doubtful whether the brief *a* is absolute after every open consonant. In the incompleteness of literal definition, so characteristic of all Semitic writing, much must necessarily have been left to the reader's knowledge of the speech so symbolized, to supply orthographical deficiencies; and as we find the compounds *Sas*, *Sis*, etc., so we may fairly assume that the *Dārasa* of Kapardigiri and the *Dārasika* of the coins were intended to be read as *Dharsa* and *Dharmika* (धर्म); the Southern Pāli of course duplicated the *m* in lieu of the compound *rm*. Major Cunningham has discovered a method of combining the *rm*, subsequently introduced into the Bactrian nomismatic alphabet, whereby the *ṛ* was run into the *ṡ* for the apparent purpose of stifling the intermediate *a*; and I am the more disposed to concur in this assignment, since I imagine I observe in all the words representing *Dharma*, wherein this compound is used, that the tail stroke of the usual subjunct *r* is rejected from its place at the foot of the *dā*.

Among other progressive efforts towards the due discrimination of the superposed *r*, I detect a remarkable, though solitary, instance of its expression by a dot above the succeeding consonant in the name of Arkhabiyā. This means of representing the *r* is somewhat in parallel accord with the system of the South, where the sign was figured as little more than a prolonged dot above the conjunct letter. But even among these Pāli alphabets we have no very positive example of its employment prior to the Sāh inscription at Gīrnār, though there is every reason to suppose that it was in use much earlier than the date of that writing.

28. The formation of the Bactrian *l* presents no peculiarity demanding comment. I may, however, note its representation by the letter *r* on the medals of Helioekes, and I may refer to the substitution of *l* for *r* in the Dhānī inscription, and the parallel interchanges of these letters in the Western languages of Persia. 'Jour. Roy. As. Soc.,' xiii., 375.<sup>1</sup> The Parthian *l*, it will be seen, retained much of the original figure of the Bactrian type, and had nothing in common with any of the direct offshoots from the Phœnician model.

29. *ṛ* = ṡ. The *v* of the Bactrian system may be fairly taken to correspond with the original idea of a Semitic *ṛ* *res*; indeed, some of the intermediate forms of the latter consonant-vowel assimilate completely with the outline of the analogous semi-vowel of the Eastern series.<sup>2</sup>

<sup>1</sup> [See also 'Caldwell's Dravidian Grammar,' p. 120.]

<sup>2</sup> [Gesenius, p. 26, and tab. i., A, 6; Judea, tab. i., and Type Table *infra*, series 1.]



The identities of the 7 *ε* have been already alluded to, vol. i., p. 103. The letter is only further remarkable for the difficulty with which it is at times discriminated from the nearly similarly outlined *ε's* and *ε's*. The intentional distinction seems to consist in the more straight formation of the head line, and the angularity given to its point of junction with the down stroke, which also participates in the lesser degree of curvature. At Manikyāla a further divergence may be detected in the extra length given to the perpendicular line.

31. *λ* = *ϕ*. I am unable to detect any direct affinity between the earliest monumental form of the common Bactrian *λ* and the antecedent outlines of the Semitic *ϕ*. The nearest approach, indeed, to the ordinary configuration of the Eastern letter is afforded in the *ϕ* of the Western system. The Duc de Luynes enters, under the Seleucidan period, a form of *ϕ* nearly identical with the Arian numismatic symbol, but the ascertainment of the value of the character is marked as doubtful, and even if finally admitted, I should prefer to pronounce in favour of its derivation from the Bactrian exemplar, rather than the indebtedness of the latter to the Western source. The formation of the Kapardigiri *λ* seems to have been effected by the delineation of a downward curve, but little dissimilar to the ordinary *λ*, into which was inserted a perpendicular line,—a method of definition which the *Stamitique* *ϕ* (circa, 18 a.c.) seems singularly enough to have preserved. In progress of time the Arian *λ* becomes more cursive, or rather takes such a form as should avoid the necessity of a second application of the pen. Under neither form does it seem to have anything in common with the Pāli *λ*.

32. *□* = *ϕ*. The second, or palatal, *λ* of the Arian series need scarcely be looked for among the signs of strictly Semitic origin, and may be accepted as an independent invention to meet the wants of Sanskrit vocalization.<sup>1</sup> The earliest Pāli form of this *ϕ*, as I have before remarked, seems to have been borrowed from the Bactrian outline which stood for the *ϕ*. The Southern edicts of Asoka make use of but one *λ*, and the contrast between the two systems of writing, in this respect, may be readily exemplified in the word *ϕ□ϕ* *suvasaka* of the Arian inscription, which is written *λλλ* *suvasaka* in the Gīrār text (xiii., 3).

33. *ϕ* = *ϕ*. The Arian *λ*, unlike the letter last referred to, must under every aspect be supposed to have had a counterpart in the languages of the West, and its identity in shape with the secondary

<sup>1</sup> [I have elsewhere adverted to a possible Parthian derivative from this character, but as the language of the Bilingual inscriptions, wherein the former occurs, is still undetermined, the value and association of the Western form remains purely conjectural. See 'Num. Ch.', xii., 78.]

forms of the Phœnician  $\varpi$  is sufficiently striking. Its absolute inversion, under its Bactrian adaptation, need cause no surprise, as the obvious necessity of discriminating its power from the compound  $ma$ , whose outline, under the local system of insertion of medial vowels in the body of the covering consonant, exactly imitated the configuration, and hence the latter may presumptively be taken to have conflictingly superseded the proper functions of the ordinary  $ak$ ; which sibilant had therefore to be provided with a distinctive though not altogether novel form of character.

34, 35.  $\gamma = \text{𐎧}$   $\delta = \text{𐎨}$ .<sup>1</sup> The Bactrian alphabet, in common with the Indian Pāli, possessed distinguishing signs for the long and short vowel  $a$ , though it was deficient in this respect in the quantitative symbols for the  $i$  and the  $u$ , for each of which a single form had to respond to the double articulations. The Arian system, like its Southern associate, duly contrasted the initial and medial outlines of both vowels and diphthongs. The initial forms of the soft and hard  $a$ 's are marked in plate xi., the authority for the latter resting solely on the numismatic character made use of, with dubious propriety, in the name of Apollodotus. The Kapardigiri Inscription either does not mark the difference between the powers of the two vowels, whether initial or medial, or the failure to discover the additional sign, must be attributed to its shape and isolation from its covering letter, and the state of the surface of the rock, which was evidently opposed to its detection, unless the observer chanced to know sufficient of the language to expect and seek for the simple dot which constitutes the essential difference. As a medial, the short  $a$  may be held to be ordinarily inherent in each consonant; and the long  $a$ , in appropriate coincidence with the arrangement of the other vowels, is defined by the detached dot, the discriminating adjunct of the  $d$  initial.

The Bactrian  $\gamma$  admits of no approximation to any of the purely Semitic forms of  $\aleph$ ; indeed, it approaches nearest in identity to another

<sup>1</sup> [Colonel Rawlinson has annexed to his exposition of the value of the Persian cuneiform  $a$  an elaborate note ('*Jour. Roy. As. Soc.*' vol. x., pp. 64, 78), on the general subject of Arian  $a$ 's and their correspondents in the Semitic system. One of the few points upon which I altogether dissent from his conclusions is his assumed derivation of the Parthian and Sassanian  $a$ 's from the original Hebrew  $\varpi$  *āleph*. The languages in question, so far as we have present knowledge of them, did not need any alphabetical symbol for the latter utterance; indeed, when Arabic came to be written in Pehlvi characters, the simple  $\aleph$  of the old series had to perform the representative functions of the foreign articulation. It seems much more reasonable to infer that the Eastern copy of the  $a$  (whether exclusively devoted to that vowel, or permissible as a substitute for  $\varpi$  in the euterminous dialect), was based upon some of the varying forms of the original Phœnician  $a$  rather than upon the outline of a letter for which the adapters had little or no use, and whose normal and subsidiary configurations were almost without exception opposed to the graphic definition eventually adopted into the derivative alphabets. Cf. also Geom., p. 21, etc.]

letter of the Western series, namely, the *g*. It is possible that this character may have been incorporated from the common stock, and subjected to new duties; but I should prefer to suppose a positive invention of a new character, or a very marked simplification of the complicated cross-strokes of the earliest *g*, rendered requisite, like many of the other changes, by the necessity of avoiding complex outlines among the radical letters, with a view to their facile reception and legible representation of the short vowels in combination.

The radical form of the full or initial Arian *ṣ* = *s* claims extraneous attention, in the fact that its outline constituted the basis for the construction of all the other vowels and diphthongs of its own alphabet, which are severally distinguished by the additional marks supplemented in each case to the normal *s*, while the same discriminating signs suffice, in combination with consonants, to represent the medial form of their several fundamental letters.

An indication of no little importance in the question of derivations, developed by this law, is to be detected in the limitation and simplified extension of the orthographical rule of the Pāli, which took the initial *h* as the basis of certain other vowels and diphthongs, discriminating them from the simple letter *s* by supplemental additions; thus *h* + *a* became *ḥā*, *h* + *i*, *ḥi*, etc., while *i*, *e*, *u*, had separate forms. The Arian scheme, following out this notion with more effective systemization, made *ṣ* the groundwork of the entire vocalic series.

38. The vowel *u* demands a passing notice, rather for the modification it undergoes than for any difficulty in its recognition. The initial on the Kapurdigiri rock is formed by the addition of a foot-line to the standard *s*, in the forward direction of the writing; and a similar mark effectively fulfils the duty of the medial vowel in combination with consonants. An optional interchange of symbols for the initial may be observed on the coins of Bakratides, which is instructive as evincing the limited precision of the orthographical science of the period. In some cases the opening syllable of this name is defined by a combination of the medial sign of the *s* prefixed to a squarely-outlined *u* initial; in others, the sound of *u* is represented by a fully developed initial *u*, followed by an unattached and completely formed initial *u*. The numismatic *u* medial is speedily transformed into a loop, which form it retains throughout its later monumental course.

41. The equivalent of the Sanskrit *uṣ* is formed in the Kapurdigiri inscription of the subjunction of an arrow-point to the foot of the normal *ṣ* *a*, and may reasonably be supposed to figure in convenient modification of the standard *u* *a*, whose sound it convertibly responds to. A similarly outlined suffix is used for the same purpose in com-

bination with consonants, as in Kamboji, Gandharanam (tab. v.). On coins the stiffness of the adjunct is amended by its transformation into a semicircular curve in continuation of the down stroke of the  $\gamma$   $\alpha$ , a symbol which, it may be remarked, still retains the elements of the primary  $\circ$   $\omega$ . The change may be attributed to the greater facility of expression, incident to the continuous use of the pen in current writing, as contrasted with the earlier chisel sculpture of lapidary epigraphy, which had nothing to gain by uninterrupted lines. This numismatic suffix appears frequently on coins and inscriptions of more recent date conjoined with the letter  $\gamma$   $\alpha$ , in positions, as regards the latter, which clearly necessitate the interpretation of the compound as *aaa*, 'year;' though I notice an apparent inability to define the requisite *anuvāda* in combination in the names of Menander, Amyntas, and Gondophares, which it is difficult to account for.<sup>1</sup>

32. The *ś* of the Bactrian alphabet is remarkable as being the only standard compound consonant in the entire range of the Kapurdigiri edict; the subjunction of the *r* was allowable with any consonant that required the combination; but the suffix of the *ś*, or rather its incorporation with another character into a distinct sign, was reserved for the conjunction now cited; and this compound retained so much of the force of a distinct letter that it admitted of the insertion of a vowel or the subjunction of the *r* like any other simple consonant. The divergence from the Kapurdigiri outline in the later examples of its use is limited to a straightening off of the cross-lines, whereby it is conveniently discriminated from the character *ś* or *ś*, with which it was otherwise liable to be confounded.

Before taking leave of these imperfect contributions to the

<sup>1</sup> [Colonel Rawlinson attributes these omissions to a general orthographical law common to the Persian cuneiform and the Bactrian systems. His remarks on the subject are as follows:—

'I need not multiply examples of the absorption of the nasal, as the first member of a compound articulation; for I have already, as far as argument is concerned, abundantly verified the existence of such an orthographical law; and it is one, moreover, with which the identical construction of the numismatic Bactrian\* has long ago familiarized Orientalists.'

Colonel Rawlinson is in error in regard to the second and third names quoted, the insertion of the *anuvāda* is palpable and undoubted, and, when looked for, it is visible enough in one instance in Major Cunningham's plates, on whose authority I conclude the author speaks. The Kapurdigiri inscription further evidences that this assumed rule, if sound at all, is, in practice, rather constant to the opposite effect, as I may instance at hazard from the names of Devanasepriya, Antiyoke, Antikina, and the words *pashandashu* (tab. v.), *athasastirana* (tab. vi.), etc.]

\* 'Remark the orthography of the names of Menander, Antimechus, Antialkidas, Amyntas, etc. In Indian Palli the nasal is preserved before the consonants of all classes. See 'Essai sur le Palli,' p. 80.' 'Journ. Roy. As. Soc.,' x., 122.

history of Bactrian Palaeography, and terminating these introductory remarks by the exhibition of the positive data of facsimiles, I desire to advert cursorily to the Parthian or Chaldaeo-Pehlvi and the cognate Sassanian-Pehlvi literal series, exemplars of each of which have been inserted in pl. ix. The first of these claims its position in the general inquiry, in appropriate elucidation of many of the alphabetical coincidences and derivative identities already adverted to; the second founds its title to notice, in this place, upon its apposite intermediary position in the progressive palaeographic development of the writing of Asia and the important part it will be seen to have played in its position, as the sole apparent vehicle of speech, whether official or domestic, under the specially national reconstitution of the Persian empire,<sup>1</sup> and the influence that, even in its official extinction, it carried with it into the learning and literature of the conquering Arabs;<sup>2</sup> while its alphabetical forms and difficultly-comprehensible language survive so largely in their fitting

<sup>1</sup> [I have for long past insisted upon one deduction of high import in the history of the Zoroastrian languages, 'in the significant fact implied in the extensively prevailing use of the Pehlvi character, as *prima facie* evidence of the existence and currency of the language itself, or of its more dialectic modifications. I would cite the universality of its influence throughout nearly the entire Persian empire; its employment as the vehicle of expression for the monumental records of the kings; its uniform official currency in the numerous mints of the Sassanian empire; and the geographical definition of its boundaries from the Tigris and the Persian Gulf on the S.W., to Merv and Zabolistan on the N.E., as manifested by the legends on the Arab coins issued within or near those limits. But beyond this I would now exhibit its acceptance in the affairs of private life, as exemplified by the prevalence of its literal forms on the signets and seals of every-day use. And I would claim this much of deduction from the facts available, that whatever other forms of speech may have existed in the land, whatever of more perfect systems of writing may have been known or employed, it is clear that the seventeen letters of the Pehlvi alphabet sufficed to express all that either official routine or ordinary business transactions required. From our inscriptions and coins we can fix with precision the date of the currency of this style of writing, and unhesitatingly claim its dominance in Persia from A.D. 223 to A.D. 75 (A.D. 695). Our new authorities, the geoms, do not of themselves similarly define their own epoch; but we may hope, by testing the forms of the alphabet, and observing closely other significant indications, to fix approximately their place in history.'—'Jour. Roy. As. Soc.,' vol. xiii., p. 374 (1852). See also Westergaard, 'Zendavesta,' i. 19 (Copenhagen, 1854).]

<sup>2</sup> [Here is their own testimony to one most important fact in the history of civilization.—*در عهد عبدالملک جرید دیوانی از صورت فارسی باصری* MS 'Tārīkh Guzīdah.' Even so late as 318 A.D. the Arabs were still translating Pehlvi books.—See Reinoud, 'Abulféda,' p. 117.]

places as monumental, numismatic, and personal records, or the more isolated but carefully-guarded religious services, which, in return, have, in these days, led to the comprehension of one section of the historical epigraphy,<sup>1</sup> otherwise, to us, so enigmatically endorsed upon the less perishable materials of metal or gems.

As I have ventured to infer a derivation of the more distantly cultivated and more obviously divergent Bactrian alphabet from a parentage in common with or intermediately through the Phœnicæo-Babylonian, it is demanding but scant faith to ask for a more direct concession of the influence of the latter upon the Parthian or Chaldæo-Pehlvi of almost indigenous site, and which, epochally speaking, is so limitedly varied from its obvious prototype.<sup>2</sup> The Sassanian hereditative, and for a long time

<sup>1</sup> [J. Olshausen, 'Numismatic Chronicle,' vol. xi., p. 52.]

<sup>2</sup> [It may be as well to indicate, as far as possible, the surface over which there is extant evidence of the spread of this character. Inscriptions graven in its letters, in parallel association with the Sassanian Pehlvi, are to be found—1st, at Persepolis; 2nd, at Shahroor (35° 39', 44° 24'); and 3rd, at Pâi Kâlî, within the Turkish frontier southward of Sulimâli, which latter have only recently been discovered by Sir H. Rawlinson, who further states that isolated but earlier varieties of this character are to be found in inscriptions at—1, Anushab; 2, Helwân; 3, Shîmbur, in the Bakhtiari mountains; and 4, at Behabân. Or, to state the case generally, the style of writing has an Eastern limit of 150 miles beyond the Tigris. Further, it is found on certain classes of Imperial Parthian coins ('Vologases,' iii. etc.), as well as on several varieties of local issues, which up to this time are supposed to be sub-Parthian or Parthio-Persian mintage. The most modern date of its use in inscriptions is to be referred to the reign of Shâpûr I. (A.D. 240 to 279), indeed, it would appear to have been speedily superseded by the more readily discriminated Sassanian Pehlvi, in which alone the monumental records (Ker Porter, vol. ii., pl. lviii.), and the coin legends of his successors are couched. Cf. 'Philosophical Transactions,' vol. xlix., p. 593, pl. xviii. (1755). Pellerin 3me 'Supplément' (1767), pl. i., fig. 13, p. 32. De Sacy, 'Mémoires sur diverses Antiquités de la Perse,' pp. 72, 126, 202, etc. Ouseley, 'Medals and Gems' (London, 1801). 'Mionnet,' v. 638. Millingen's 'Gylloge' (London, 1838), p. 84. Ker Porter, pls. iv., xvii., xxviii., etc. Rich's 'Babylon and Persepolis' (London, 1839), pl. xii. 'Ariens Antiques,' pl. xv., fig. 23, etc. Rawlinson, 'Memoir on Persian Cuneiform Inscriptions,' 'Jour. Roy. As. Soc.,' vol. x., p. 118, et seq.; and my Pehlvi Alphabets, 'Jour. Roy. As. Soc.,' vol. xii., p. 262; and vol. xiii., p. 3. Westergaard, 'Bundeshuk,' p. 34 (1831). 'Numismatic Chronicle,' vol. xii., p. 53; and Dr. Scott's papers, vols. xvii., xviii. *ibid.* Lindsay, 'View of the Coinage of the Parthians,' (Cook, 1852). 'Hang. Ueber die Pehlvi-Sprache' (Gott. 1854).]

While adverting to Parthian writing, I feel bound to notice a somewhat pretentious article, recently published, which professes to interpret the legends on several classes of sub-Parthian currencies. The paper in question is inserted in the 'Zeitschrift' of the present year (1857), p. 706, under the title of 'Lettre, etc., sur quelques médailles à légendes iraniennes de l'époque Arsacide, par Comte A. de Gobineau' (Téhéran, le 12 Mars, 1857). As the author seems to have been altogether un-



The **כְּבִישָׁא**—the only doubtful portion of the whole—I understand to mean 'lion killing'. The mixture of Aramaic and Persian in the compound need cause no surprise; neither, I am bound to add, is the etymological expression of the participle in accord with modern Persian grammar; but these objections are infinitesimal in the interpretation of so irregular and little-known a language as that used in the official records of the early Sassanians.



The next step in the onward course of the Sassanian alphabet, its merging into the Pehlvi of the early Arabs in Persia, which is nearly literatim the same as the Pârsîs have preserved in Kermân and Gujarât, admits of no possible cavil: how much of the essence of these modified letters the Arabs took into their own superseding Kufic has only been partially investigated, and hitherto insufficiently allowed for; but the number of the normal forms of Pehlvi that have passed into and been reproduced in the so-called Zend alphabet are palpable and manifest on the most cursory inspection; and whatever may be the real antiquity of the language of the Avestâ, couched in these letters, there can be but one opinion as to the comparatively recent date at which the characters themselves must have been compounded out of more ancient systems of writing.

I now exhibit the Plate of Comparative Alphabets, which I have prepared in supersession of Prinsep's original plate xi. and to complete the data for testing the rise and progress of the Bactrian alphabet from its Semitic elements, I have appended the two plates of the modifications of that class of literal symbols so obligingly prepared for me by the Duc de Luynes, whose original introductory notice I insert in explanation of the derivation of each.<sup>1</sup>

#### ALPHABET PHÉNICIEN (PHÉNICIE PROPRE).

*Des temps de Sargon.*—Les lettres א ב ג ד ה ו ז ח ט י כ ל מ נ ס ע פ ק ר ש ת sont prises dans les légendes des deux pierres gravées à inscriptions, découvertes par M. Place sous les taureaux du Palais de Sargon.<sup>2</sup> Les autres lettres sont tirées de pierres gravées à

<sup>1</sup> [It is a pleasure to me to record the circumstances under which I have to acknowledge M. le Duc de Luynes as a consultant in this Essay. During a passing visit to Paris, I was made aware that he had most liberally permitted the Numismatic Phœnician type, prepared for the illustration of his own privately circulated works, to be made use of in the printed sale-catalogue of the Bureau de Belles-lettres. Encouraged by this concession, I ventured to solicit a similar favor in my own case, so far as a single circulatory alphabet was concerned. I need not add that this request was readily complied with; but moreover, on my subsequently addressing M. de Luynes, with a view to obtaining a more precise idea of the epoch and localities to which those specimen letters were due, I was surprised and gratified by a promise of a mature and comprehensive review of the entire question of Phœnicio-Semitic Alphabets, of which the present materials exhibit the performance.]

<sup>2</sup> Ces légendes sont אבדכחט יכלמנעפקרש ת Obadiah et Riphodiah.

[illegible]

## ANILIN, PHENOL, NITROBENZENE, PHTHALEIN &amp; TOLUENE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Mater. Bibere.	ALPHABET PHÉNICIEN IPHÉNIC (PROPRE)					DÉRIVATION DE L'ALPHABET PHÉNICIEN			
	Des Tempes de l'Empire ass. 1450	Des Tempes de l'Empire ass. 1450	Des Tempes de l'Empire ass. 1450	Des Tempes de l'Empire ass. 1450	Des Tempes de l'Empire ass. 1450	Phéniciens	Phéniciens ass. 1450	Phéniciens ass. 1450	Phéniciens ass. 1450
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3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
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24	24	24	24	24	24	24	24	24	24
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26	26	26	26	26	26	26	26	26	26
27	27	27	27	27	27	27	27	27	27
28	28	28	28	28	28	28	28	28	28
29	29	29	29	29	29	29	29	29	29
30	30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31	31
32	32	32	32	32	32	32	32	32	32
33	33	33	33	33	33	33	33	33	33
34	34	34	34	34	34	34	34	34	34
35	35	35	35	35	35	35	35	35	35
36	36	36	36	36	36	36	36	36	36
37	37	37	37	37	37	37	37	37	37
38	38	38	38	38	38	38	38	38	38
39	39	39	39	39	39	39	39	39	39
40	40	40	40	40	40	40	40	40	40
41	41	41	41	41	41	41	41	41	41
42	42	42	42	42	42	42	42	42	42
43	43	43	43	43	43	43	43	43	43
44	44	44	44	44	44	44	44	44	44
45	45	45	45	45	45	45	45	45	45
46	46	46	46	46	46	46	46	46	46
47	47	47	47	47	47	47	47	47	47
48	48	48	48	48	48	48	48	48	48
49	49	49	49	49	49	49	49	49	49
50	50	50	50	50	50	50	50	50	50
51	51	51	51	51	51	51	51	51	51
52	52	52	52	52	52	52	52	52	52
53	53	53	53	53	53	53	53	53	53
54	54	54	54	54	54	54	54	54	54
55	55	55	55	55	55	55	55	55	55
56	56	56	56	56	56	56	56	56	56
57	57	57	57	57	57	57	57	57	57
58	58	58	58	58	58	58	58	58	58
59	59	59	59	59	59	59	59	59	59
60	60	60	60	60	60	60	60	60	60
61	61	61	61	61	61	61	61	61	61
62	62	62	62	62	62	62	62	62	62
63	63	63	63	63	63	63	63	63	63
64	64	64	64	64	64	64	64	64	64
65	65	65	65	65	65	65	65	65	65
66	66	66	66	66	66	66	66	66	66
67	67	67	67	67	67	67	67	67	67
68	68	68	68	68	68	68	68	68	68
69	69	69	69	69	69	69	69	69	69
70	70	70	70	70	70	70	70	70	70
71	71	71	71	71	71	71	71	71	71
72	72	72	72	72	72	72	72	72	72
73	73	73	73	73	73	73	73	73	73
74	74	74	74	74	74	74	74	74	74
75	75	75	75	75	75	75	75	75	75
76	76	76	76	76	76	76	76	76	76
77	77	77	77	77	77	77	77	77	77
78	78	78	78	78	78	78	78	78	78
79	79	79	79	79	79	79	79	79	79
80	80	80	80	80	80	80	80	80	80
81	81	81	81	81	81	81	81	81	81
82	82	82	82	82	82	82	82	82	82
83	83	83	83	83	83	83	83	83	83
84	84	84	84	84	84	84	84	84	84
85	85	85	85	85	85	85	85	85	85
86	86	86	86	86	86	86	86	86	86
87	87	87	87	87	87	87	87	87	87
88	88	88	88	88	88	88	88	88	88
89	89	89	89	89	89	89	89	89	89
90	90	90	90	90	90	90	90	90	90
91	91	91	91	91	91	91	91	91	91
92	92	92	92	92	92	92	92	92	92
93	93	93	93	93	93	93	93	93	93
94	94	94	94	94	94	94	94	94	94
95	95	95	95	95	95	95	95	95	95
96	96	96	96	96	96	96	96	96	96
97	97	97	97	97	97	97	97	97	97
98	98	98	98	98	98	98	98	98	98
99	99	99	99	99	99	99	99	99	99
100	100	100	100	100	100	100	100	100	100

Alphabet JUIF	ÉCRITURE PUNIQUE					Alphabet JUIF
	Alphabet JUIF	Alphabet JUIF	Alphabet JUIF	Alphabet JUIF	Alphabet JUIF	
א	א	ב	ג	ד	ה	ו
ב	ב	ג	ד	ה	ו	ז
ג	ג	ד	ה	ו	ז	ח
ד	ד	ה	ו	ז	ח	ט
ה	ה	ו	ז	ח	ט	י
ו	ו	ז	ח	ט	י	כ
ז	ז	ח	ט	י	כ	ל
ח	ח	ט	י	כ	ל	מ
ט	ט	י	כ	ל	מ	נ
י	י	כ	ל	מ	נ	ס
כ	כ	ל	מ	נ	ס	ע
ל	ל	מ	נ	ס	ע	פ
מ	מ	נ	ס	ע	פ	צ
נ	נ	ס	ע	פ	צ	ק
ס	ס	ע	פ	צ	ק	ר
ע	ע	פ	צ	ק	ר	ש
פ	פ	צ	ק	ר	ש	ת
צ	צ	ק	ר	ש	ת	
ק	ק	ר	ש	ת		
ר	ר	ש	ת			
ש	ש	ת				
ת	ת					



légendes plus ou moins longues, dont plusieurs caractères font partie des légendes sur les deux pierres gravées de M. Place et doivent, par là, se rattacher au même alphabet.

*Du temps d'Érousaspe.*—Alphabet tiré de la longue inscription sur le Sarcophage de ce Roi. [*Journal Asiatique*, Avril-Mai, 1846.]

*Sous les 1<sup>ers</sup> Achéménides.*—Cet alphabet est formé des légendes sur les médailles les plus archaïques d'Arados : Tête virile barbe et laurée. Revers, Navire ; au dessus **K. D.** suivi de lettres numériques variées, **A. D. I. D. Y. D.** ; les lettres **Q** et **W** se trouvent sur des pièces d'argent des anciens Rois de Perse représentant un Roi frappant de son poignard un lion dressé devant lui ; auprès, **W**, et au revers : **N(i)S(i)B** **ΣΥΣ** au dessus d'une ville à tours crénelées, etc. Cette pièce est au Musée britannique.

*Du temps d'Artabanus Longue-main.*—Tiré des médailles d'or et d'argent des Rois de Tyr, de Ciltium et des Chittim (*cf.* nos Sotrapes).

*Sous Artabanus Moine.*—Tiré de la numismatique des Rois de Ochal (Byblus) vivant probablement à cette époque (*cf.* nos Sotrapes), et de médailles encore inédites de cette dynastie dans sa collection.

*Sous Artabanus Ochal.*—Tiré des Dariques de mauvais travail frappées sous ce Prince.

*Sous Alexandre et les 1<sup>ers</sup> Séleucides.*—Monnaie d'or et d'argent aux types d'Alexandre frappés sous ses règnes et sous ses premiers successeurs à Joppé, Aré, Arados, et Thama.

*Sous les Séleucides, de 312 à 145.*—Lettres indées et numériques sur les médailles d'Arados, de Tyr et de Sidon, frappées sous la domination de ces Princes. Médailles de Tyr frappées sous Antiochus IV. et Démétrius II. et de Laodicée au revers d'Antiochus IV.

*Sous la domination Romaine, depuis l'an 115.*—Monnaie en cuivre d'un travail de décadence frappée à Sidon, Tyr, et Marathus.

#### DÉRIVATIONS DE L'ALPHABET PHÉNICIEN.

*Arabe.*—Manuscrits sur papyrus appartenant au Duc de Blacas. Cescripteurs paraît croire que ces Manuscrits qui font mention de la captivité d'un peuple en Egypte, sont allués à celle des Hébreux et pourraient être contemporains. En tout cas, ils sont très anciens. Cependant, le monument de Carpentras, portant une inscription de même écriture, ne paraît pas remonter à une époque très reculée.

*Palmyrénien.*—La plupart des inscriptions Palmyréniennes connues ne sont pas plus anciennes que les premiers Empereurs Romains et ne dépassent guères l'époque d'Alexandre Sévère mort en 235 de Jén. Chr. Cependant, il existe une médaille presque archaïque, frappée à Balé de Pampbylle, dont la légende est évidemment en caractères palmyréniens (*voir* nos Sotrapes).

*Sinaitique vers l'an de J. C. 18.*—Cet alphabet est tiré de médailles encore inédites de Rois des environs de la mer rouge et de l'Idumée, dont le principal date ses monnaies de l'an 330 (des Séleucides).

*Sinaitique après l'an de J. C. 18.*—Alphabet établi par M. Beur d'après les inscriptions de Gebel Mocattah. Inscr. veteres litt. et ling. hebreuq. in cogn. ad mont. Sin. magn. num. repert., &c. Lipsie, 1840, 4to.

#### ÉCRITURE PUNIQUE.

*Avant 395.*—Médailles archaïques de Motya, Trite et Aes, frappées en Sicile. Motya fut détruite en 395.

De 396 à 332.—Médailles de travail grossier avec les types de Cérès et de Proserpine, adoptés par les Carthaginois seulement depuis 390, époque où ils commencent à honorer ces Déeses, et pièces frappées avec le type du droit imité des monnaies d'Alexandre.

*Première guerre punique*.—Médailles au type de la tête de Cérès et du cheval ou du Pégase, d'un bon travail, et que l'on trouve en grande abondance en or, argent, et cuivre.

*Seconde guerre punique*.—Les mêmes types en peu variés, mais d'un travail de médiocrité et de matière d'un titre bien plus bas.

*Syphax*.—Médailles de bronze de ce Roi et inscriptions de Macrille exactement de la même épigraphie que les légendes de Syphax.

*Juba I<sup>er</sup>*.—Monnaies de ce Prince en argent et cuivre.

*Égypte, Rome*.—Monnaies puniques d'Espagne et d'Afrique avec des types impériaux en conformité par leur écriture à celles qui portent ces types.

*Satrapes de Cilicie et particulièrement ceux de Tarse* (cf. nos Satrapes).

*Cyprus vers 424*.—Médailles de Salamine, frappées probablement sous le gouvernement d'Abdamon. La lettre Π appartient à une médaille d'Anastase de la même époque.

*Abdamon, Roi de Salamine*.—Abdamon, Satrape de Cypru, régnait à Salamine. Une médaille de ce Prince, que je possède, porte son nom, ΠΑΝΤΑΡΧΗΣ.

*Écriture venue de l'inscription de Cilicia*, époque incertaine mais probablement médiée.

L'inscription en question est celle du Musée d'Oxford reproduite par Gesenius dans ses 'Monumenta Phœnicia,' pl. xi, inscr. No. 14, 7 a.

## TYPE TABLE OF SEMITIC ALPHABETS.

I have but little to say in commendation of the subjoined type table of comparative Semitic alphabets, the majority of which consist of such reproductions of the materials of early commentators as the German type-founders chanced to have prepared for the use of printers.

The series Nos. 1, 3, and 4, which are based upon Gesenius' plates, were procured for the casual illustration of the general subject, before I was favoured with the elaborate and more mature facsimiles of the Duc de Luynes, which in a measure supersede the less comprehensive alphabets in type metal,<sup>1</sup> though I have permitted these latter to stand in their introductory capacity, for the purposes of facility of reference. The Kufic literal signs are likewise of but limited paleographic

<sup>1</sup> [The fourth or Palmyrene series is peculiarly infelicitous in its rendering of the forms of the originals; however, M. de Luynes' facsimiles will amend its deficiencies.]



# TABLE OF SEMITIC ALPHABETS.

MODERN HEBREW	1. PHOENICIAN	2. NUMISMATIC PHOENICIAN	3. ARAMAIC	4. PALMYRENE	5. SYRIAC	MODERN SYRIAC	6. KUFFIC	MODERN ARABIC
א	𐤀	𐤁	ܐ	Ⲁ	ܐ	ܐ	ܐ	أ
ב	𐤁	𐤂	ܒ	Ⲁ	ܒ	ܒ	ܒ	ب
ג	𐤂	𐤃	ܓ	Ⲁ	ܓ	ܓ	ܓ	ج
ד	𐤃	𐤄	ܕ	Ⲁ	ܕ	ܕ	ܕ	د
ה	𐤄	𐤅	ܗ	Ⲁ	ܗ	ܗ	ܗ	ه
ו	𐤅	𐤆	ܘ	Ⲁ	ܘ	ܘ	ܘ	و
ז	𐤆	𐤇	ܙ	Ⲁ	ܙ	ܙ	ܙ	ز
ח	𐤇	𐤈	ܚ	Ⲁ	ܚ	ܚ	ܚ	ح
ט	𐤈	𐤉	ܛ	Ⲁ	ܛ	ܛ	ܛ	ط
י	𐤉	𐤊	ܝ	Ⲁ	ܝ	ܝ	ܝ	ي
כ	𐤊	𐤋	ܟ	Ⲁ	ܟ	ܟ	ܟ	ك
ל	𐤋	𐤌	ܠ	Ⲁ	ܠ	ܠ	ܠ	ل
מ	𐤌	𐤍	ܡ	Ⲁ	ܡ	ܡ	ܡ	م
נ	𐤍	𐤎	ܢ	Ⲁ	ܢ	ܢ	ܢ	ن
ס	𐤎	𐤏	ܣ	Ⲁ	ܣ	ܣ	ܣ	س
ע	𐤏	𐤐	ܥ	Ⲁ	ܥ	ܥ	ܥ	ع
פ	𐤐	𐤑	ܦ	Ⲁ	ܦ	ܦ	ܦ	ف
צ	𐤑	𐤒	ܥ	Ⲁ	ܥ	ܥ	ܥ	ع
ק	𐤒	𐤓	ܩ	Ⲁ	ܩ	ܩ	ܩ	ق
ר	𐤓	𐤔	ܪ	Ⲁ	ܪ	ܪ	ܪ	ر
ש	𐤔	𐤕	ܫ	Ⲁ	ܫ	ܫ	ܫ	ش
ת	𐤕	𐤖	ܬ	Ⲁ	ܬ	ܬ	ܬ	ت



value, as they do not represent the earliest form of that adaptive alphabet.' There are, however, two sets of characters (not of German execution) to which I desire to call attention. No. 2 comprises the Numismatic Phœnician cut for the Duc de Luynes, and imitated principally from the forms of letters prevailing on the coins of Cilicia and Cyprus. The alphabet No. 5 is, likewise, a novelty, for which I am indebted to the Rev. W. Cureton,<sup>2</sup> who explains its derivation in the following terms:—

'The type was principally copied from MSS. of the 6th century, and represents the earliest form of the character known to us. It is identical with that of the most ancient MS. in the British Museum, date A.D. 411; but the forms of the letters are made a little more carefully than they were written by the person who copied that MS., and imitate more closely those of some better scribe, although about a century later.'

The alphabet in question claims a double interest, in exemplifying the earliest extant Syriac writing, as well as in its near identity with the Estrangelo graven on the celebrated Nestorian monument of Si gan Fu, dated in the 8th century,<sup>3</sup> while its progress on its Central Asian course, thus clearly marked, illustrates the parentage of the Mongol alphabets, whose derivation from a Syriac source has long been freely conceded.

<sup>1</sup> [A valuable contribution towards the study of the palæography of the Arabs has been furnished by J. C. Lindberg ('Lettre à M. Brøndsted,' Copenhagen, 1830), from whose work I cite the following note on the earlier authorities on the subject:—I. G. C. Adler. 'Descriptio codicum quorundam eulcorum in bib. reg. Heimensi,' Altonæ, 1780. Silvestre de Sacy. 'Mémoires sur l'origine et les anciens monuments de la littérature parmi les Arabes,' 'Mém. de l'Académie,' vol. I., p. 247. The same. 'Notices et Extraits,' etc., vol. viii., p. 209; and 'Journal Asiatique,' 1827. M. Kepp. 'Bilder u. Schriften der Vorseit,' il., 287.—To these I may add Marcel's 'Palæographie Arabe,' Paris, 1828. 'Des Khallikaz,' Orient. Trans. Fund. pp. xv., xvi., etc.; and lastly, I would refer to M. Renan's comprehensive review, p. 320, in his 'Histoire générale des Langues Sémitiques,' 1855. While referring to Kufic writing, I must not omit to call attention to the interesting copper-plate grant to the Christian Church in India—which bears the signatures of attesting witnesses—severally in Kufic, Pehlvi, and Hebrew characters. 'Jour. Roy. As. Soc.,' vol. vii., p. 343. 'Madras Journal of Literature and Science,' vol. xiii. (1845), pl. viii.]

<sup>2</sup> [Or I should rather say my obligations are due to Mr. Watta, of Crown Court, to whom the type properly belongs.]

<sup>3</sup> ['La Chine d'Athanasius Kircher,' Amsterdam, 1670.—'Assemani,' iii., 2nd part, p. 758. Rome, 1725.—M. Huc. 'Christianisme en Chine,' p. 48. Paris, 1847.—'Journal of the American Oriental Society,' vol. v., p. 178.—Reinaud, 'Géogr. d'Aboufeda,' p. 365.—Renan, 'Hist. Gén.,' vol. i., p. 268.]

Finally, I have introduced a set of Zend letters, more with the object of completing the series of cognate alphabets, than for any evidence I wish to claim for them among the other paleographic memorials of the ancient currency of which we have good and authentic proof; and, for the purposes of direct comparison, I have prefixed to this enlarged alphabet the several original Pehlvi characters upon which the Zend correspondents seem so obviously to have been formed.<sup>1</sup>

## II. ARIAN NOMENCLATURE.

I do not propose to recapitulate the Arian transcriptions of the Greek names; the details of each, together with the variations in the standard orthography, will be found duly marked in the Coin Catalogue, and most of their peculiarities will have already been considered in the determination of the alphabet in whose literal forms they are expressed. The same may be said of the Oriental names, which in process of time superseded the Greek designations, and where the definition must be supposed to be authoritative under its Arian form rather than in the now imitative transcript in Grecian characters. It may, however, be useful to summarize the Arian titles, whether direct translations or local equivalents of the leading idea of titularization adopted from the conquerors, even if it be merely to avoid the tedious repetition of interpretations on the recurrence of each king's little-varied epithets.

1. The more common indigenous titles of *Maharaj*, 'great king,' and its superlative combinations of *Rajatharaj*, 'king over kings,' and *Rajaratja*, 'king of kings,' scarcely require notice.

2. The equivalent of the Greek *σαρπ* is rendered by the word *Tandata*, a provincial derivative from *त*, 'to preserve'; and here, as in all cases, I adhere to the manifest orthography

<sup>1</sup> [This Zend type, like the early Syriac just acknowledged, is also the property of Mr. Watts. The very excellent Pehlvi font, as has been already noticed, belongs to Messrs. Harrison and Co. St. Martin's-lane.]

# ZEND ALPHABET.

## VOWELS.

SHORT VOWELS, <i>Pehlvi</i> ,	𐬀 a.	𐬁 e.	𐬂 i.
" <i>Zend</i> ,	𐬀 a.	𐬁 e.	𐬂 i.
LONG VOWELS, <i>Pehlvi</i> ,	𐬀 ā.	𐬁 ī.	𐬂 ū.
" <i>Zend</i> ,	𐬀 ā.	𐬁 ī.	𐬂 ū.
" <i>Zend</i> ,	𐬀 ā.	𐬁 ī.	𐬂 ū.

## CONSONANTS.

GUTTURALS,	<i>Pehlvi</i> ,	𐬀 k.	𐬁 kh.	𐬂 g.
"	<i>Zend</i> ,	𐬀 k.	𐬁 kh.	𐬂 g.
PALATALS,	<i>Pehlvi</i> ,	𐬀 ch.	𐬁 j.	𐬂 y.
"	<i>Zend</i> ,	𐬀 ch.	𐬁 j.	𐬂 y.
DENTALS,	<i>Pehlvi</i> ,	𐬀 t.	𐬁 th.	𐬂 d.
"	<i>Zend</i> ,	𐬀 t.	𐬁 th.	𐬂 d.
LABIALS,	<i>Pehlvi</i> ,	𐬀 p.	𐬁 f.	𐬂 b.
"	<i>Zend</i> ,	𐬀 p.	𐬁 f.	𐬂 b.
SEMI-VOWELS,	<i>Pehlvi</i> ,	𐬀 i or y.	𐬁 r.	𐬂 s.
"	<i>Zend</i> ,	𐬀 i or y.	𐬁 r.	𐬂 s.
"	<i>Pehlvi</i> ,	𐬀 v. or w.	𐬁 h.	𐬂 n.
"	<i>Zend</i> ,	𐬀 v.	𐬁 h.	𐬂 n.
SIBILANTS,	<i>Pehlvi</i> ,	𐬀 s.	𐬁 sh.	𐬂 z.
"	<i>Zend</i> ,	𐬀 s. (c.)	𐬁 sh.	𐬂 z.
NASALS,	<i>Pehlvi</i> ,	𐬀 m.	𐬁 n.	𐬂 ng.
"	<i>Zend</i> ,	𐬀 m.	𐬁 n.	𐬂 ng.

<sup>1</sup> The definition of the Zend Alphabet is adopted from Spiegel's 'Grammatik der Parsischen'; the Pehlvi series is confined to the older and unquitted forms.



of the original, without attempting to reconcile the deviations from the laws of Sanskrit grammatical construction, or to trace the process of vernacular degradation; it is sufficient to say that, having the Greek counterpart, and ordinarily an appropriate Sanskrit root, we must remain content to take the inflections and orthographical variations the die engravers have left behind them.

3. The *δέσμιος* of the coins is represented by the term *Dhamika*, or rather *Dhramika*, from धृ, 'to hold, to maintain,' whence धर्म, 'virtue,' etc.

4. The term *νικηφόρος* appears under the optional forms of *Jayadhara* and *Jayata*, the derivation of which, from जि, 'to conquer,' जय, 'conquest,' is sufficiently obvious.

5. The counterpart of *ἀνέκλυτος* appears in parallel accord as *apadihāta*,<sup>1</sup> for अपतिहृत, 'unrepulsed' (from हृ, 'to strike or hurt').

6. *Mahata* and *Mahataka*, of obvious derivation, occur as the representatives of the Greek *μεγας*.

7. The title *Pradicha*, otherwise *Praticha*, which stands as the indigenous representative of the Greek *ἐπιφάνης*, may readily be identified as the vernacular form of प्रतिष्ठित *Pratishṭhita*, 'renowned.'

8. The transcripts of the Greek *συνδάδης* and *συνδγγός* seem sufficiently assured, as likewise does the translation of 'ΑΔΕΛΦΙΑΔΕΥΣ' in the local *Brada-putrasa*, 'brother's son.'

### III.—THE EPOCHAL AND TERRITORIAL DISTRIBUTION OF THE BACTRIAN MONARCHY.

I have already intimated that I am not in a position, either as regards preparation or present opportunity, to review, with the deliberation the subject demands, the classification of the long list of Bactrian kings, the sole witnesses of whose rule, in the majority of cases, exist in the emanations from their mints

<sup>1</sup> [On Gondophares' coins, *apratihata*.]



exhumed from time to time in and around the ancient seats of government.

In other cases credit is claimed for coins under their faculty of illustrating written history: in this instance they comprehend the sole data for history itself; at least, from their records alone must be drawn, with scant exception, all testimony at present available of the survival, re-institution, and extinction of the dominant Hellenic element on the site of Alexander's furthest conquest in the East. In the almost total absence of annals, whether Occidental or Oriental, it is from the legends stamped upon the public money that we must reconstruct the story of the otherwise unrecorded potentates who swayed the destinies of these lands for upwards of two centuries.

For such tales as these medallie memorials may tell, I must refer to the works of those authors who from time to time have treated this section of numismatics in detail; contenting myself, for the present, with reproducing, with but scant comment, the matured results arrived at by each.<sup>1</sup>

<sup>1</sup> [*Independent Works*.—*Rhetoria regni Graecorum Bactriani, in qua simul Graecorum in India coloniarum vetes memoria explicatur, auctore Theophil. Sigefr. Bayero*, Petropoli, 1738. Mionnet, *'Supplément'*, vol. viii. (1837). Lassen, *'Zur Geschichte der Griechischen und Indisch-Scythischen Könige'*, Bonn, 1828. *'Coins of Greek, Parthian, and Indo-Scythian Kings of Bactria and the countries on the Indus'*, by Dr. C. Grottefeld, Haunover, 1846. *'Ariana Antiqua: a descriptive account of the Antiquities and Coins of Afghanistan (with a memoir on the buildings called Tapes, by C. Masson)'*, H. H. Wilson, London, 1841. *'Historical Results, deducible from recent discoveries in Afghanistan'*, by H. T. Prinsep, Esq., London, 1844. *'Indische Alterthumskunde'*, von Ch. Lassen, Bonn, 1847.

*Colonia Asiatica Russica*.—*Description of select coins from originals or drawings in the possession of the Asiatic Society*, by H. H. Wilson, Esq., vol. xvii., p. 559 (1832).

*Journal of the Asiatic Society of Bengal*.—*'Note on Capt. Hey's Bactrian Coins'*, by H. Tuerens, Esq., vol. ix., p. 70. *'Points in the history of the Greek and Indo-Scythian Kings in Bactria, Cabul, and India, as illustrated by deciphering the ancient legends on their coins'*, by Christian Lassen, Bonn, 1828, vol. ix., p. 251; continued, pp. 339, 440, 627, 733. *'Notice of some counterfeit Bactrian Coins'*, by Captain Alexander Cunningham, vol. ix., p. 393. *'Notes on Captain Hey's Bactrian Coins'*, by Capt. A. Cunningham, vol. ix., p. 531. *'Description of, and deductions from, a consideration of some new Bactrian Coins'*, by Capt. A. Cunningham, vol. ix., p. 567; note to ditto, p. 1068. *'Second notice of some forged coins of the Bactrians and Indo-Scythians'*, by Capt. A. Cunningham, vol. ix., p. 1217. *'A sketch of the second Silver Plate found at Badakshan'*, by Capt. A. Cunningham, vol. x., p. 570. *'Second notice of some new Bactrian Coins'*, by Capt. A. Cunningham, vol. xi., p.

## No. 1.

## GREEK DYNASTIES.—GENERAL LIST.

PROF. H. H. WILSON.

	B.C.		B.C.
Theodotus I. . . . .	256	Philoxenos . . . . .	130
Theodotus II. . . . .	240	Antialkides . . . . .	135
Euthydemos . . . . .	230—190	Archelios . . . . .	125—120
Demetrius . . . . .	190	Menantas . . . . .	125
Eukratides . . . . .	181	Apollodotus . . . . .	110
Heliokles . . . . .	147	Diomedes . . . . .	100
Lysias . . . . .	147	Hermias . . . . .	98
Amyntas . . . . .	135	Agathokles . . . . .	135
Agathokleia . . . . .		Pantaleon . . . . .	120
Antimachus . . . . .	140		

## BARBARIC KINGS.

HO-HUMENUS, KADAPHUS, KADPHISES.

Mayes . . . . .	100	Kadises . . . . .	60
Pultrius . . . . .	80	Adas . . . . .	50
Spalyrius . . . . .	75	ΣΙΤΗΡ ΜΕΓΑΣ, King of Kings .	

130. 'On the Gems and Coins figured in the preceding plate,' by H. Torrion, Esq., B.C.S., vol. xi., p. 137. 'Coins of the Indo-Scythians. Princes of Cabul (translations of some uncertain Greek legends),' by H. Torrion, Esq., B.C.S., vol. xi., p. 137. 'Coins of Indian Buddhist Satraps, with Greek inscriptions,' by Major A. Cunningham, vol. xxiii., p. 379.

*Transactions of the Royal Asiatic Society of Great Britain and Ireland*.—'An account of Greek, Parthian, and Hindu medals, found in India,' by Major James Tod, vol. i., p. 312.

*Journal of the Royal Asiatic Society*.—'Observations on some ancient Indian Coins in the cabinet of the Royal Asiatic Society,' by Prof. H. H. Wilson, vol. iii., p. 281.

*Journal Bombay Branch of the Royal Asiatic Society*.—'Observations on the Bactrian and Mithraic Coins, in the cabinet of the Bombay Branch of the Royal Asiatic Society,' by James Bird, Esq., vol. i., p. 293.

*Journal des Savants*.—M. Babel Rochette, a.d. 1824, pp. 325, 326. Supplément, 1825, pp. 514, 577; note, 640, (Dr. Henigberger's coin). *Enc. Supplément*, a.d. 1826, February; Allard's (i.e. Vosters's) collection. *Enc. Supplément*, a.d. 1828, p. 736; M. Court's collection; ditto, a.d. 1829, p. 89, ditto.

*Journal Asiatique*.—M. E. Jaquet, Feb. 1826, 3ème série, vol. i., p. 122; Sept. 1826, vol. ii., p. 234; Nov. 1827, vol. ix., p. 401; Feb. 1828, vol. v., p. 163; May, 1829, vol. vii., p. 395.

*Revue Numismatique, Blois*.—'Collection Numismatique du Général Court: Rols de la Bactriane,' par Ad. de Longperier, p. 61 (1829).

*Numismatic Journal* (London).—'Græco-Bactrian Coins,' by Professor Wilson, vol. i., p. 144 (1837). 'Proceedings of the Numismatic Society' (London). 'Mém. par Professor Wilson, on the recently discovered Græco-Bactrian Coins, 14th Dec., 1837.

*Numismatic Chronicle*.—Major Cunningham, 'Monographs, etc.,' vol. viii., p. 175. W. C. W. Farr, Esq., on Bactrian Coins, vol. xvi., p. 108.]

## INDO-PARTHIAN DYNASTY.

Vonones . . . . .	Kades . . . . .
Undophernes . . . . .	Miscellaneous Aracidan
Gondoparus . . . . .	Kings . . . . .
Abagaus . . . . .	

## INDO-SCYTHIAN PRINCES OF KABUL.

Kadphisa . . . . .	Ouerki . . . . .
Kanerki . . . . .	Barsore . . . . .
Kenarano . . . . .	Sasaniens . . . . .

## CONTEMPORARY CLASSIFICATION.

Euthydemus.	
Demetrius . . . . .	Eucratides.
Lysias . . . . .	Helioktes.
Amyntas . . . . .	Antialkides . . . . .
Agathokleia . . . . .	Antimachus . . . . .
	Agathokles
	Apollodotus
	Dionodes
	Hermias
	Sa-Hermias (?)
	'Ariana Antiqua,' p. 267 (1841).

## No. 2.

## M. DE BARTHÉLEMY'S LIST.

1. Défection de la Bactriane et commencement du règne de Diadoïe, vers 256 av. J. C.
  2. Agathoklès succède à son père, vers 246 av. J. C.  
Euthydème s'empare du trône de la Bactriane par le meurtre d'Agathoklès 216 av. J. C.
  3. Pustaleon se maintient dans le Kaboulistan oriental contre Euthydème jusqu'à vers 214 av. J. C.
  4. Ouerki d'Euthydème avec Antimachus après 216 av. J. C.
  5. Traité de paix, conclu avec le Roi de Syrie, vers 206 av. J. C.
  6. Euthydème fait des conquêtes dans l'Ariane et l'Arachosie, vers 200 av. J. C.
  7. Démétrius fils d'Euthydème succède à son père, vers 190 J. C.
  8. Eucratides s'empare de la royauté dans la Bactriane, Démétrius fonde une monarchie dans l'Arachosie et dans les contrées de l'Inde qui avaient été conquises par son père vers 181 av. J. C.
  9. Eucratides fait pendant plusieurs années la guerre à Démétrius et finit par s'emparer de ses états, vers 164 av. J. C.
  10. Eucratides étend ses conquêtes dans l'Inde, vers 160 av. J. C.
  11. Meurtre d'Eucratide, par son fils Hélioktes, qui s'empare de la couronne en Bactriane, vers 155 av. J. C.
- Ici commence le démembrement graduel de la monarchie, et les données historiques semblent nous manquer pour tenter même un ordre chronologique quelconque.
12. Antimachus fonde un royaume dans la Drangiane ?
  13. Antialkides réunit sous sa domination l'Arachosie et le Kaboulistan oriental.

15. Ménéandre fonde un puissant royaume dans l'Inde.  
 16. Arsace VI., Mithridate I. roi Parthe, envahit la Drangiane, vers 143 av. J. C.  
 17. Chûte complète de la Monarchie grecque-bactrienne, proprement dite, vers 129 av. J. C. 'Kölnner Zeitschrift,' 1843, p. 76.

The subjoined list has been abstracted from Major Cunningham's lithographed table inserted in the eighth volume of the 'Numismatic Chronicle,' 1843. It will be found to enter into an elaborate detail of the epochal and territorial distribution of the various divisions of the Bactrian empire. The assignment of the geographical boundaries is understood to have been primarily based upon the author's interpretations of the mint monograms discovered on the coins of the different kings. It is needless to add that these results must be received with considerable caution, as most of my readers will appreciate the ordinary difficulties environing the resolution of monogrammatic combinations, as well as the obstacles that exist to the application of the preferable readings under even a well-defined system of comparative geography, a department in which we are sadly deficient in regard to the countries in question.

## No. 2.

## MAJOR CUNNINGHAM'S TABLE.

NO.	B.C.	
1	256	Diodotus I. } Bactriana (including Sogdiana, Bactria, and Margiana).
	243	Diodotus II. }
2	247	Agathocles } Paropamisadae and Nysa.
3	227	Patalam }
4	220	Euthydemus—Bactriana, Ariana (including Aria, Drangia, Arachosia, and Paropamisadae), Nysa, and subsequently Gandharita, Peshawaria, and Taxila.
5	196	Demetrius—ditto, ditto; and, later in his reign, Patalam, Syriacene, Larice.
6	190	Heliocles—Bactriana and Paropamisadae.
7	190	Antimachus Thos—Nysa, Gand., Peuk., and Taxila.
8	184	Eucratides—Bactriana, Ariana, besides Patalam, Syriacene, and Larice, as well as Nysa, Gand., Peuk., and Taxila.
9	173	Antimachus Nikephoros—Nysa, Gand., Peuk., and Taxila, contemporarily with Eucratides' retention of the rest of his dominions.
10	165	Philezenes—succeeds to Antimachus Nikephoros' kingdom.
11		Nicias—ditto, with the exception of Taxila.
12	165	Apollodotus succeeds Eucratides in Ariana, as well as Pata., Syr., Lar.
13		Zoilus }
14		Diomedes } follow Apollodotus in Ariana alone.
15		Dionysius }
16	169	Lysias—succeeds these in Paropamisadae, and obtains Nicias' dominion of Nysa, Gand., and Peuk.; while Mithridates I. possesses himself of Ariana, having previously gained Margiana from Eucratides.

- NO. B.C.
- 17 150 Antialcidas—succeeds to Lyzias' kingdom.
- 18 Amyntas } follow Antialcidas.
- 19 Archebius }
- 20 161-149 Menander—reigns in Paropamisadae, Nysa, Gand., Peuk., Taxila, Por.  
Reg., Cath., Patalene, Syr., Lar.
- 21 135 Strato—succeeds, with the exception of the countries of Pata., Syr., Lar.,  
which fall to Manas.
- 22 Hippostratus } follow Strato.
- 23 Telephus }
- 24 126 Hermenus—rules over Parop., Nysa, Gand., Peuk. (The Su-Sakas obtain  
Aria, Drangia, and Arach., from the Parthians).
- 25 Manas—has Taxila, Por. Reg., Cath., Pata., Syr., Lar.
- 26 105 Kadphises—(Yuezhi)—takes possession of Hermenus' kingdom, and Taxila  
from Manas (Kozala Kadaphisa).
- 27 Vonones }
- 28 Spalygis } Paropamisadae.
- 29 Spalirios }
- 30 110 Azus—succeeds Manas, obtaining also, in 90 a.c., Nysa, Gand., and  
Peuk.
- 31 80 Asilinus—succeeds Azus in the three latter, adding Taxila, and the Paro-  
pamisadae.
- 32 80 The Seleter Meges obtains the dominions of Azus, and subsequently those of  
Asilinus.
- 33 60 The Yuchi again possess Parop., Nysa, and Tax., etc.
- 34 26 Gondophares—reigns in Ariana.
- 34 Abdagases (and Sincakes or Adimigases)—ditto in ditto, less the Parop.
- A.D.
- 35 44 Arsaces (Oronospades or Orthomandes)—ditto, ditto.
- 36 107 Fikorus Monnesses—ditto, ditto (Hilaketch in Bactriana. [36\* Orthagnes.])
- 297 Artemon—in Aria, Drangia, Arachosia.
- Sassanians.

\* Numismatic Chronicle, vol. xlii., p. 175 (1842).

#### No. 4.

#### M. LASSEN'S LIST.

#### DIE GRIECHISCH-BAKTRISCHEN UND GRIECHISCH-INDISCHEN KÖNIGE.

##### 1. DIE GRIECHISCH-BAKTRISCHEN.

Diodotus I., vor 250 vor Chr. G.

Diodotus II., seit 237 . . . . . Agathokles, in Badakshan und am obern Indus  
seit 245.

Euthydemus, unabhängig seit 245;  
in Baktrien seit . . . . . 223; Pantaleon.

Demetrios, seit 205; besetzt um 195.

Eukratides, nach 180.

Helioikes, seit 180; Lyzias, nach 165; Antimachos, seit 170.

Archebios, 150-140; Antialkides; Philoxenos, um 160.

Amyntas.







191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
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## 2. DIE GRÄCHISCH-INDISCHEN KÖNIGE

Apollodorus, nach 169.

Zollus und Dionysios.

Menandros, seit 144.

Straton, um 124.

Hippostratos, nach 114.

Dionodot, Nikias, Telephos, zwischen 114 u. 100.

Hermaios, 100—85.

## No. 5.

## DIE INDOSEMITISCHEN UND PARTHISCHEN KÖNIGE.

## 1. ÇAKA-KÖNIGE.

Mayus, nach 120 vor Chr. G.

Azilais, um 109.

Azus, seit 96.

Spaliraios, um 60.

Vologases, kurz vor u. nach Chr. G.

Spalyria.

Vandaphranes, um 50.

Abdagases, von 40 bis 30.

## 2. JONISCH-KÖNIGE.

Kadphises I., nach 86 vor Chr. G.

Kadphes, und seine namenlosen Nachfolger etwa bis 60 v. Chr. G.

Kadphises II., seit 34 vor Chr. G., bis etwa 1.

## 3. TURANISCH-KÖNIGE.

Hushka oder Oerki, von etwa 10 vor bis 5 nach Chr. G.

Gushka, bis 10 nach Chr. G.

Kandhuka, oder Kaneki, bis 40.

Balas, bis 46.

Oer Konorsus, bis 60.

<sup>1</sup> *Indische Alterthumskunde*, vol. II., p. xxiv., published 1852.

IV.—As I am compelled to avoid entering upon any such comprehensive revision of the general subject as should justify my attempting to recast the order of succession of the Greek princes of Bactria and Northern India, it becomes necessary that I should adopt, for the moment, some one of the lists above quoted, to serve as a basis for the arrangement of the annexed catalogue. I have therefore selected for the purpose that of Major Cunningham, as being more full in names, more facile of reference, and as grounded upon an examination of by far the most ample series of original specimens.

This outline, it will be seen, was published many years ago, and I have no doubt its author would now be prepared to subject it to extensive modifications. I shall perhaps be pardoned, therefore, for anticipating some of the more obviously needed emendations. In regard to the tables of monograms which accompany this catalogue (pls. xi. c and xi. d), it may be necessary to explain that a degree of difficulty has been experienced in the allocation of the several varieties of these enigmatical compounds. Some examples, that depart but slightly from combinations previously entered, have been inserted in

the plates independently in their modified form, in order to avoid the risk of the omission of what might eventually prove to be a separate symbol. And, further, some few monograms have been intentionally repeated, with a view to bring more distinctly together the complete group pertaining to a given monarch.

The perpendicular lines dividing the associate ciphers (60 *et seq.*) are inserted to mark the position in the field of the piece, in reference to the main device, occupied by each.

## I. DIODOTUS.

### 1.—Gold.

Obverse:—Head of the king, with fillet, to the right.

Reverse:—Erect figure of Jupiter, in the act of hurling the thunderbolt; Ægis on the left arm; eagle in front of the left leg; a chaplet in the field; no monogram.

Legend:—ΒΑΣΙΛΕΥΣ ΔΙΟΔΟΤΟΥ.

R. Ruchette, '*Jour. des Sav.*,' '*Bibliothèque Impériale*,' Captain Hay. (This last most perfect coin has, in addition to the other symbols, a spear head in the field under the left arm); '*Ariana Antiqua*,' p. 218; '*Trésor de Numismatique*,' pl. lxxii, 4.<sup>1</sup>

### 2.—Tetradrachma. Similar types (Cunningham, '*Numismatic Chronicle*,' vol. viii., p. 178, and unpublished plates).

Monogram, No. 1, with I. The chaplet is omitted.

### \*)—Drachma. Similar types.

M. de Bartholomæi, '*Kölnes Zeitschrift*,' 1843, p. 75, pl. fig. 1.

Monogram, No. 2, with C.e; chaplet, etc.

Mr. Stcher and British Museum Coins, Monograms indistinct.

Major Cunningham further cites in his table the Monogram No. 2\* from the Coins of Diodotus ('*Num. Chron.*,' vol. viii., p. 179).

## II. ANTIOCHUS.

### 1.—Tetradrachma (weight, 4 drachmas 14 grains Fr.)

Obverse:—Head, with fillet, to the right. ΔΙΟΔΟΤΟΥ ΕΠΙΘΡΟΝ.

Reverse:—Erect figure of Jupiter, as in Diodotus' coins.

Legend:—ΒΑΣΙΛΕΥΣ ΑΝΤΙΟΧΟΥ ΕΠΙΘΡΟΝ.

Monogram, No. 3 (with chaplet).

M. de Bartholomæi, '*Kölnes Zeitschrift*,' 1843, pl. iii., fig. 2, p. 67.

An equally perfect coin of similar types, in the possession of Mr. J. Gibbs, Bombay Civil Service, has the monogram No. 4. The piece in question is stated to weigh 270 grains.

<sup>1</sup> Coins bearing similar devices, from the mint of Antiochus II., may be referred to in pl. ii., fig. 1, p. 25, vol. i. of this work; Burnes's '*Bekhlach*,' pl. iii., fig. 8; '*Ariana Antiqua*,' p. 219; '*Trésor de Numismatique*,' lxxii., 3.—Monograms: Mr. Gibbs' coin (Tetrad.) A: (see pl. xiii., fig. 1 of this work); '*Bibliothèque Impériale*,' B.; Captain Hay (Drachma) C; Mr. Fevres' coin (Drachma) C.e associated with D.



- 2.—Copper. Pl. xviii. fig. 8. [Types similar to No. 5. Agathocles.]

Obverse:—Panther.

Legend:—ΒΑΣΙΛΕΥΣ ΠΑΝΤΑΛΕΟΝΤΟΣ.

Reverse:—Bacchante.

Legend, in Indian Pali, ८ १ ३ ३ ६. *Pantaleon*.

Monogram:—Σ, γ, etc. 'Ariana Antiqua,' pl. vi. fig. 11.

#### IV. EUTHYDENUS.

- 1.—Gold.

Obverse:—Head of king to the right, with fillet.

Reverse:—Hercules seated on a rock, resting his club on a pile of stones.

Legend:—ΒΑΣΙΛΕΥΣ ΕΥΘΥΔΗΜΟΥ.

Monogram, No. 7, according to 'Ariana Antiqua,' pl. i. fig. 1.; quoted from Pellier, 'Additions aux Médailles des Rois,' p. 95. The 'Bild. Imp.' coin, to my perception, has the monogram copied under No. 7 a.

- 2.—Tetradrachma. Pl. ii. fig. 2.

Obverse:—As in No. 1.

Reverse:—Hercules, etc., with his club resting on his right knee.<sup>1</sup>

Monograms, Nos. 8, 9a, Aa, B.

'Ariana Antiqua,' pl. i. figs. 3, 3, 4. 'Jour. des Sav.,' 1854, pl. fig. 2; 1855, pl. i. fig. 2.

\*)—Drachma, similar types. Capt. Hay. Monogram, 8a.

Variant, pl. xii. fig. 1. Reverse, type as in gold coin. Monogram, No. 10.

'Jour. des Sav.,' 1854, pl. fig. 3; Monogram, No. 11.

Other coins have Monograms, Nos. 12, A, Aa, Aa, and A d.

'Ariana Antiqua,' pl. xii. fig. 1, has 12 with A d.

\*)—Drachma, similar types. 'Ariana Antiqua,' pl. xxi. fig. 2.

- 3.—Tetradrachma. Pl. xxi. 3, and pl. xii. figs. 2, 3.<sup>2</sup>

Obverse:—Head of King.

Reverse:—Hercules standing, to the front; head encircled with a chaplet; on the left arm are the club and lion's skin; right hand extended.

Monogram, No. 3. 'Ariana Antiqua,' pl. i. fig. 11. Monogram 5 a.

Variety. Other coins vary the reverse device, inasmuch as the extended right hand holds a second chaplet. British Museum, Monogram, No. 9 a (weight, 260.4 gr.) Brereton ditto (weight, 258.5 gr.)

\*)—Drachma, as No. 3 variety. 'Ariana Antiqua,' pl. i. fig. 12; 'Jour. des Sav.,' 1855, pl. i. fig. 3; British Museum, plated coin, Monogram 5 b.

- 4.—Didrachma.

Obverse:—Laurelled head of Apollo to the left.

Reverse:—Triped. H. Rochette, 'Jour. des Sav.,' Dec. 1838, p. 741.

<sup>1</sup> [Where the legends are omitted, they are to be understood to be identical with those cited on the latest occasion.]

<sup>2</sup> [I have had the obverses of the two coins, lately acquired by Messrs. Peire and Brereton, engraved, for the purpose of enabling numismatists to compare the portraiture, as here rendered, with the style of likeness prevailing on classes 1 and 2, an impression existing among our most practised antiquarians that the contrasting dies represent the busts of two independent monarchs, as opposed to the idea of a likeness of one and the same person at different periods of his life.]

## 5.—○ Copper. Pl. xxvii., fig. 4.

OBSERVE.—Bearded head, to the right.

REVERSE.—Horse, *fron.*‘*Ariana Antiqua*,’ pl. i., figs. 13, 14, 15.

## 6.—○ Copper (small).

OBSERVE.—Head indistinct.

REVERSE.—Erect figure of Apollo to the left, with arrow in the right and bow in the left hand.

‘*Ariana Antiqua*,’ pl. ii., fig. 1.

## 7.—○ Copper.

OBSERVE.—Head as in No. 4.

REVERSE.—Triped.

Monogram, No. 3a.

Captain Hay, ‘*Treasures de Numismatique*,’ lxxii. 11;  
also ‘*Köhler*,’ pl. i. 3.<sup>1</sup>

## V. DEMETRIUS.

## 1.—Tetradrachma. Head of king with fillet, to the right.

REVERSE.—Minerva armed, to the front.

LEGEND:—ΒΑΣΙΛΕΥΣ ΔΗΜΗΤΡΙΟΥ.

Monogram, No. 13, with the letter Δ above the figure.

‘*Jour. des Sav.*,’ 1836 (Hönl’s coin), vol. i., p. 4, 1635; re-engraved in ‘*Ariana Antiqua*,’ pl. ii., fig. 3. ‘*Treasures de Num.*,’ lxxii. 14.

## 2.—Tetradrachma.

OBSERVE.—Head of king, to the right, with helmet fashioned like an elephant’s head.

REVERSE.—Hercules, like No. 3, Euthydemus’ design, but his right hand is occupied in the act of placing the clasp on his brow.

LEGEND:—ΒΑΣΙΛΕΥΣ ΔΗΜΗΤΡΙΟΥ.

Mr. Gibber’s coin, monogram, No. 5. ‘*Köhler*,’ p. 221.

Monogram, No. 5a.

M. Roehete, ‘*Jour. des Sav.*,’ 1838, p. 743.

D.M. coin, monograms, Nos. 5 (weight, 262.5 grs.), 5a, and 14 (inferior execution, weight, 236 grs.)

\*)—Obol. Plate xiii., fig. 2. Similar design. ‘*Ariana Antiqua*,’ pl. ii., fig. 5.

Monogram, 5. M. Haoul Roehete notices a Triebalus of this type,

‘*Jour. des Sav.*,’ Decr. Suppl. 16. ‘*Treasures Numismatique*,’ p. 149.

Other monograms, 5b, 6, and 6a.

\*)—No. 4, pl. ii., ‘*Ariana Antiqua*,’ has the neck of the king bare.

A second unpolished coin H. I. H. has the monogram No. 15 (OR).

## 3.—○ Copper.

OBSERVE.—Head of Hercules.

REVERSE.—Apollo (?)

Monogram, No. 15.

‘*Ariana Antiqua*,’ pl. xxi., fig. 3.

<sup>1</sup> [I have not been able to obtain a sight of Köhler’s work; I quote his coins from Grütendorf, ‘*Die Münzen der Könige von Bactrien*,’ 1839. The original seems to have appeared under the following title: ‘*Köhler, Médailles grecques de Rois de la Bactriane, du Bosphore*,’ etc. Petersbourg, 1822, 8vo. ‘*Supplément à la suite des Méd. des Rois de la Bactriane*,’ *ibid.*, 1822.]



## 4.—Copper.

OVERSE:—No. 3.

REVERSE:—Hercules; the right arm is upraised towards the head of the figure.  
Cunningham, 'Jour. As. Soc. Beng.', vol. xi., pl. fig. 1.

## 5.—Copper.

OVERSE:—Elephant's head.

REVERSE:—The Caduceus.

'Jour. As. Soc. Beng.', vol. ix., p. 69; and vol. xi., pl. fig. 2.

## VI. HELIOLICS.

## 1.—Tetradrachma.

OVERSE:—Head of king to the right.

REVERSE:—Jove, standing to the front, with spear and thunderbolt.

LEGEND:—ΒΑΣΙΛΕΥΣ ΑΙΚΑΙΩΤ ΜΑΙΝΕΑΚΕΥΣ.

Geissfeld, p. 20, quoting 'Catalogue d'Ennery,' p. 40.<sup>1</sup>

'Trésor de Numismatique,' lxxiii., 15.

Monogram, No. 16.

'Ariana Antiqua,' pl. ii., fig. 3.

British Museum coins, monograms, Nos. 11a, B (weight of piece, 269·6 grs.)

Mr. Gibbs' coin, monogram 17. Mr. Brewster, ditto. Lady Sale, No. 16.

A cast in the possession of Mr. Freeling has the letters ΓΓ (No. 19) below the word ΑΙΚΑΙΩΤ on the reverse.

\*)—Drachma. Similar types. 'Bibl. Imp.' Monogram, 11A.

## 2.—Tetradrachma.

OVERSE:—Helmeted head.

REVERSE:—Jupiter seated; the right hand holding a small figure of victory, the left resting on a spear.

LEGEND:—ΒΑΣΙΛΕΥΣ ΑΙΚΑΙΩΤ ΜΑΙΝΕΑΚΕΥΣ.

Capt. Hay.

## 3.—Plated copper (Drachma?).

OVERSE:—Helmeted head, closely resembling that of Eukratides, within a marginal border of alternate drops and beads.

REVERSE:—Jove seated.

LEGEND (blundered):—ΒΑΣΙΛΕΥΣ ΑΙΚΑΙΩΤ ΜΑΙΝΕΑΚΕΥΣ.

Mr. E. C. Bayley; also, Capt. Hay.

\*)—Drachma. Similar types.

Monogram B.

Capt. Hay.

## 4.—Hemidrachma.

OVERSE:—Head of king.

LEGEND:—ΒΑΣΙΛΕΥΣ ΑΙΚΑΙΩΤ ΜΑΙΝΕΑΚΕΥΣ.

REVERSE:—Jove, as above, No. 1.

LEGEND, in Bactrian-Pāli or Arian characters, *Māhārājasa Dharmakasa Heliakrayasa*.

'Ariana Antiqua,' pl. xxi., fig. 5. Monogram Z.

The orthography of the name in the Arian varies at times to *Heliakrayasa* and *Heliakrayasa*; the former occurs on a coin in the E. I. H., with the monogram No. 8a. Other hemidrachmas have monograms No. 20 and 20 with Z.<sup>1</sup> ['Catalogue des Médailles du Cabinet,' de M. d'Ennery. Paris, 1788.]

- 5.—□ Copper. Pl. xliii, fig. 7.

Obverse:—Head.

Reverse:—Elephant to the left.<sup>1</sup>

<sup>1</sup> *Ariana Antiqua*, pl. II, fig. 7, monogram Z. Other monograms, Nos. 8a. E. I. C. coin, 21. Mr. Price, monogram No. 22.

These coins also differ occasionally in the expression of the Arian version of the name, exhibiting it as *Helyabregans* and *Helyabrazan*.

- 6.—□ Copper. Plate xliii, fig. 8. As No. 5, but the elephant on the reverse is to the right.

- 7.—□ Copper.

Obverse:—Elephant, to the right.

Reverse:—Bull.

Capt. Hay.<sup>2</sup>

- 8.—Copper. Plate xviii, fig. 4. Degraded type.

Obverse:—Head.

Reverse:—Figure as in No. 1. Legends corrupt and imperfect.

- 9.—Copper. Plate xv, figs. 12, 13, 14. Degraded type.

Obverse:—Head.

Reverse:—Horse, free, to the left. Legends corrupt and imperfect.

## VII. ANTIMACHUS SEUS

- 1.—Tetradrachma.<sup>3</sup> (Cast.)

Obverse:—Head with fillet.

Legend:—ΑΝΤΙΜΑΧΟΣ ΣΕΥΣ.

Reverse:—Standing figure of Jupiter, as in the gold coinage of Diodotus.

Legend:—ΒΑΣΙΛΕΥΣ ΑΝΤΙΜΑΧΟΥ ΣΕΥΣ.

Monogram, No. 12.

Capt. Hay. Mr. Brexton has a similar forgery with the same monogram.

- 2.—Tetradrachma.

Obverse:—Head of king, to the right, with Camæa.

Reverse:—Neptune, to the front, with trident and palm-branch.

Legend:—ΒΑΣΙΛΕΥΣ ΣΕΥΣ ΑΝΤΙΜΑΧΟΥ.

<sup>3</sup> *Köhler*, l. 10, reproduced by *Mionnet*, sup. viii. 466.

Monogram, No. 23. British Museum coins, monogram No. 8a and 23. Lady Sale and Mr. Brexton, also No. 23.

- \*)—Drachma. British Museum, monogram No. 25.

<sup>1</sup> [The Arian legends, like the Greek, are ordinarily omitted after one insertion; where not otherwise noted, therefore, the succeeding coins are to be understood to bear similar epigraphs.]

<sup>2</sup> [I am indebted to Mr. H. C. Bayley, of the Bengal Civil Service, for most of these notices of Captain W. E. Hay's coins. I myself have seen only the silver pieces of that officer's valuable collection.]

<sup>3</sup> [It is needless to say that this important piece, which, though a cast, is evidently taken from a genuine antique, necessitates the promotion of Antimachus Seus to a close proximity, if not to a contemporaneous existence, with the founder of the Bactrian independence. This coin was not known in England when Art. iii., vol. i., went to press.]

- 9) — Hemidrachma (31·7 grs.). British Museum coin, monogram No. 9a. A second, monogram No. 23.  
Major Cunningham ('*Jour. As. Soc. Beng.*,' vol. ix., p. 372) describes a 'plated' hemidrachma of Antiochus Theos, with the monogram 'Xa.'  
\*) — Obolus. '*Ariana Antiqua*,' pl. xxi., fig. 12. Monogram 8a.

## VIII. EUCRATIDES.

- 1 — Tetradrachma. Pl. xlii., fig. 2.  
REVERSE: — Bare head of the king, with fillet.  
REVERSE: — Apollo, bow in the left, and arrow in the right hand.  
LEGEND: — ΒΑΣΙΛΕΥΣ ΕΥΚΡΑΤΙΔΟΥ.  
'Kohler,' '*Ariana Antiqua*,' pl. iii., fig. 4, monogram No. 9a.  
Lady Sale, same monogram. See also '*Jour. des Sav.*,' Sept., 1855, i. 5;  
'Mionnet,' sup. viii.; British Museum coins, monograms Nos. 10, 24, 25;  
'Bib. Imp.,' No. 26; M. le Duc de Laysnes, No. 5r.  
\*) — Drachma. Similar types. Pl. xlii. 6. General Fox, monogram 29.  
2 — Obolus. Plate xxxii., fig. 16.  
OVERSE: — Bare head of king.  
REVERSE: — Caps and palm-branches of Dioscuri. Same legend as No. 1.  
Monograms, Nos. 8a, 13a, 27, 39, 28a.  
3 — Obolus.  
OVERSE: — Helmeted head of king.  
REVERSE: — As in No. 2.  
'*Ariana Antiqua*,' pl. iii., fig. 6. Gen. Fox, monogram No. 13a.  
E. I. H., 13a, M, and 19a. British Museum, monog. 12—i.e. N.  
4 — Tetradrachma.  
OVERSE: — Bare head of king, to the right, with fillet.  
REVERSE: — Dioscuri, charging.  
British Museum. Monogram 8a.  
\*) — Drachma. Pl. xlii., fig. 8. Similar types.  
'*Jour. des Sav.*,' 1856, ii., 2. '*Trés. de Num.*,' pl. lxxiii. fig. 2.  
B.I., monogram 11.  
5 — Tetradrachma. Pl. xlii., fig. 4, p. 126. (Weight of E. I. H. coin, with suspending loop, 255·7 grs.)  
OVERSE: — Helmeted head of king.  
LEGEND: — ΒΑΣΙΛΕΥΣ ΝΕΨΑΙ ΕΥΚΡΑΤΙΔΟΥ.  
REVERSE: — Male and female heads, uncovered and unadorned with fillets.  
LEGEND: — ΗΛΙΟΚΛΕΥΣ ΚΑΙ ΑΛΕΞΑΝΔΡΗΣ.  
Monogram, No. 13a. '*Jour. As. Soc. Beng.*,' vol. vii., pl. xxvii., fig. 1. Re-engraved in '*Ariana Antiqua*,' pl. xxi., fig. 7, from the original coin.  
Col. Sykes' cast, from a possibly genuine coin of this class, and a second reproduction from the same or a similar original, in the possession of Mr. Heretou, both have the monogram No. 5a.

<sup>1</sup> [Where the monogram facsimiles in the plates differ from the published specimens, it must be understood that my copy has been taken anew from the original piece, and does not follow the engraving, used for the mere illustration of the numismatic classification.]

- 6.—Tetradrachma. Pl. xlii, fig. 5. (Weight of selected specimens in the British Museum, 238 and 239 grains.)  
 Obverse:—Helmeted head, to the right.  
 Reverse:—Dionysos, charging.  
 Legend:—ΒΑΣΙΛΕΥΣ ΜΕΓΑΛΥ ΕΥΚΡΑΤΙΔΟΥ.  
 'Ariana Antiqua,' pl. iii., figs. 1, 2, 3. Monograms 13a, 27, 29.  
 British Museum. Monograms, Nos. 8c, 11c, 13a, 29, 30, 31. Lady Sale, No. 25a.  
 B. I. Monograms, M, 29. Mr. Hayley. Monogram,  $\frac{1}{2}$  with HT in the field.  
 Capt. Robinson. Monograms 13a 29a.  
 \*)—Drachma. 'Journ. des Sav.,' 1824, pl. fig. 5. 1825, pl. i., fig. 9. 'Trés. de Num.,' lxxiii. 6. British Museum. monogram N. E.L. 286. Hay, 6c.
- 7.—Tetradrachma.  
 Obverse:—Helmeted head of the king, to the left, with a portion of the head displayed; the right arm raised in the act of darting a javelin.  
 Reverse:—Dionysos.  
 Legend:—ΒΑΣΙΛΕΥΣ ΜΕΓΑΛΥ ΕΥΚΡΑΤΙΔΟΥ.  
 Monogram 34 (?) 'Köhler,' i. 8. 'Trés. de Num.,' pl. lxxiii., fig. 7.
- 8.—○ Copper.  
 Obverse:—Head of Apollo to the right.  
 Reverse:—Horse, type, to the left.  
 Legend:—ΒΑΣΙΛΕΥΣ ΕΥΚΡΑΤΙΔΟΥ. 'Ariana Antiqua,' pl. iii., fig. 7.
- 9.—○ Copper. Pl. xlii, fig. 7. Of similar device and legends to No. 6.  
 'Ariana Antiqua,' pl. iii., fig. 8, monogram, No. 21. Mr. Hayley, No. 40.
- 10.—□ Copper.  
 Obverse:—Helmeted head, to the left, with javelin.  
 Reverse:—Dionysos.  
 Legend:—ΒΑΣΙΛΕΥΣ ΜΕΓΑΛΥ ΕΥΚΡΑΤΙΔΟΥ.  
 'Köhler.' 'Münzen,' vol. 470. British Museum, monogram 22.
- 11.—○ Copper. Size, 3. British Museum.  
 Obverse:—Helmeted head to the left.  
 Reverse:—A single horseman at the charge.
- 12.—□ Copper. Small coin. Pl. xxxii., fig. 11.  
 Obverse:—Bare head of king to the right.  
 Legend:—ΒΑΣΙΛΕΥΣ ΜΕΓΑΛΥ ΕΥΚΡΑΤΙΔΟΥ.  
 Reverse:—Cups and palm-leaves of the Dionysos.  
 Legend in Arrian:—Μελίτροπος Ελευθέρου.  
 'Ariana Antiqua,' pl. iii., fig. 12. 'Trés. de Num.,' lxxiii. 13.
- 13.—□ Copper. Pl. xlii., figs. 8-10.  
 Obverse:—Helmeted head, as in No. 6.  
 Reverse:—Dionysos.  
 Legend in Arrian:—Μελίτροπος Ελευθέρου.  
 Monograms, 17a, 21, 27, 28a, 31 with E, 33, 35a, 34, 34a, 35, 35a, 36, 37, 38, 39, 41, 43, 44, 45.  
 'Ariana Antiqua,' pl. iii., figs. 9, 10. 'Journ. des Sav.,' 1825, pl. i., fig. 7.

## 14.—□ Copper.

Obverse:—Helmeted head to the right.

Reverse:—Seated figure to the left, with a small elephant at the side (as in Antialkides' coin, No. 1).

Legend indistinct.

'Ariana Antiqua,' pl. iii., fig. 11.

## 15.—□ Copper.

Obverse:—Helmeted head of king to the left, with javelin.

Reverse:—A winged figure of Victory to the right, with chaplet and palm branch.

Legend defective.

'Ariana Antiqua,' pl. xxi., fig. 5, monogram 13a.

## 16.—□ Copper.

Obverse:—Helmeted head of king to the right.

Reverse:—Victory to the left, extending a chaplet.

ARIAN Legend:—(*Maharajasa*) *Rajadhirajasa Eucratides*.

'Ariana Antiqua,' pl. xxi., fig. 6, and British Museum, monogram 46a. Mr. Bayley, monogram, 49.

Additional monograms of Eucratides, Nos. 8c, 27a, 33A, 42.

## IX. ANTIMACHUS ΝΙΚΗΦΟΡΟΣ.

## 1.—Hemidrachma. Plate xv., fig. 2.

Obverse:—Winged figure of Victory, to the left, with palm branch in her right, and Eket in her left hand.

Legend:—ΒΑΣΙΛΕΥΣ ΝΙΚΗΦΟΡΟΣ ΑΝΤΙΜΑΧΟΥ.

Reverse:—King on horseback, to the right.

ARIAN Legend:—*Maharajasa Jayadharasa Antimachasa*.

'Ariana Antiqua,' pl. ii., fig. 16.

Prof. Wilson was under the impression that all these coins bore the same monograms, Nos. 31a ('Ariana Antiqua,' 274); they are now found to include the symbols classed under the following numbers, 27, 31, 46, and 46a.

## 2.—□ Copper. Pl. xv., 4.

Obverse:—Demeter, to the front; cornucopia on her left arm. Legend imperfect.

Reverse:—Winged figure of Victory, to the left.

ARIAN Legend:—*Maharajasa . . . Antimachasa*.

'Ariana Antiqua,' pl. ii., fig. 16. Monogram 2.

## 3.—□ Copper.

Obverse:—The skin of an animal (?)

Legend:—ΒΑΣΙΛΕΥΣ ΝΙΚΗΦΟΡΟΣ ΑΝΤΙΜΑΧΟΥ.

Reverse:—Wreath and palm-branch.

ARIAN Legend:—*Maharajasa . . . Antimachasa*.

'Ariana Antiqua,' pl. xxi., fig. 11. Monogram 47.

A silver cast of a genuine coin, in the possession of Mr. Bayley, definitely determines the attribution of this piece, contributing the full counterpart names as inserted above. It bears the monogram No. 27.<sup>1</sup>

<sup>1</sup> [See also Cunningham, 'Jour. As. Soc. Beng.', April, 1840, p. 392.]

## X. PHILAXENUS.

## 1.—Didrachma. Plate xv., fig. 1.

Obverse:—Helmeted head of king, to the right.

Legend:—ΒΑΣΙΛΕΥΣ ΑΝΙΚΗΤΟΥ ΦΙΛΑΧΕΝΟΥ.

Reverse:—Hercules with helmet, as on the obverse of Antimachus Nikophorus' coin.

ARIAN LEUEN:—*Mithradates Apollonides Philaxenus*.

'Jour. des Sav.' 1836, ii., 5. 'Ariana Antiqua,' pl. ii., fig. 17.

Monogram No. 22a.

a) —□ Hemidrachma, of similar device. Monogram No. 48a, with X.

Mr. Bayley.

b) —□ Obolus (?). Types and legends as above. The Arian name is written, *Philaxenus*. Monogram No. 34c. Captain Robinson.

Mr. Frey has a silver cast of an apparently authentic didrachma, which supplies us with a variety of this obscure type. The king's head is here uncovered. On the reverse, traces of the monogram *Phi* are visible. The Arian transcript of the name commences with the letter *Phi*.

## 2.—□ Hemidrachma.

Obverse:—Bare head of king with *Phi* to the right. Legend as above.

Reverse:—Device and legend as in No. 1.

Monogram No. 48a, with X.

'Ariana Antiqua,' pl. xvi., fig. 12.

Colonel Abbott. Monogram, No. 22, b.

## 3.—□ Copper. Plate iii., figs. 6, 7; plate xv., fig. 2.

Obverse:—Demeter, with the ordinary Greek legend.

Reverse:—Humped bull, with the usual Arian legend; the initials of the name are indistinctly expressed by *P* or *Phi*.

'Jour. des Sav.' 1836, ii., 6. 'Ariana Antiqua,' pl. ii., fig. 18.

Monogram No. 48a, 48b with X on reverse, 49, 50. H. L., 51 (?) with a Bactrian *ϕ* on reverse. Mr. Brereton. Monogram 22a, with an Arian *ϕ* on reverse, 48a and 48b, with X on reverse.

## 4.—□ Copper.

Obverse:—Crowned figure, with a long spear.

Legend:—ΒΑΣΙΛΕΥΣ ΑΝΙΚΗΤΟΥ ΦΙΛΑΧΕΝΟΥ.

Reverse:—A figure of Victory.

Captain Hay.

X<sup>a</sup>. ARZENTODAPS.1.—Hemidrachma.<sup>1</sup>

## 2.—□ Copper.

Obverse:—Erect figure, with the right arm upraised.

Legend:—ΒΑΣΙΛΕΥΣ ΑΝΙΚΗΤΟΥ ΑΡΖΕΝΤΟΔΑΠΟΥ.

Reverse:—Bull, as in Philaxenus' copper coin.

ARIAN LEUEN:—(*Mithradates Apollonides Arzentodaps*).

Mr. Bayley.

These legends have been completed from a more perfect coin figured and assigned by Major Cunningham ('Jour. As. Soc. Eng.,' 1854, p. 655).

<sup>1</sup> [Mr. Brereton deposes to the discovery of a coin of this description, which has passed from his own possession to that of Major Cunningham. He is under the impression that the types are—Obverse: King's head. Reverse: Minerva Promachos.]

I conclude that this Artemidorus is the monarch styled Artemon in Major Cunningham's list above cited; but if so, the style and fabric of his coinage must very materially alter his assumed date and position in the general list as determined by that nomenclature.

# XI. NIKIAS.

1.—□ Copper. Plate xlii., fig. 5.

Obverse:—Head of king, to the right.

Legend:—ΒΑΣΙΛΕΥΣ ΝΙΚΙΟΥ ΝΙΚΙΩ.

Reverse:—Horseman, as in No. 1, Philoxenus.

ARIAN LEGEND:—*Mithradates Tradatus Nikias*.

Colonel T. Birch. See also Cunningham, 'Journ. As. Soc. Beng.', vol. xi., p. 136.

# XII. APOLLONIDUS.

1.—○ Hemidrachma. Plate iii., fig. 4; also pl. xiv., fig. 4.

Obverse:—Head of king.

Legend:—ΒΑΣΙΛΕΥΣ ΑΠΟΛΛΟΝΙΟΥ ΑΠΟΛΛΟΝΙΟΥ.

Reverse:—Thessalian Minerva to the left.

ARIAN LEGEND:—*Mithradates Tradatus Apollonides*.

Monograms, Nos. 38a, 38b, 51, 51a, 51b, 52, 53.

'Ariana Antiqua,' pl. iv., fig. 13.

2.—□ Hemidrachma. Plate xiv., fig. 5.

Obverse:—Elephant.

Legend:—ΒΑΣΙΛΕΥΣ ΑΠΟΛΛΟΝΙΟΥ.

Reverse:—Humped bull.

Legend as in No. 1.

'Ariana Antiqua,' pl. iv., fig. 14.

Monograms 22a, and the entire suite, together with the combinations indicated under each number, from 54 to 56, both inclusive.

3.—○ Hemidrachma. Types and legends as No. 2.

'Ariana Antiqua,' pl. iv., fig. 15.

<sup>1</sup> [The Arian orthography of the name of Apollonides varies considerably in the different specimens of his extensive mintages. I notice in some instances a dot at the foot of the initial α, which elsewhere constitutes the sign of the long sound of that vowel. This is the solitary occasion upon which I have observed its use in defining more precisely the power of the ordinary γ initial. And, however little, to our ideas, the exact definition of the phonetic elements of the name may require the hard α in this place, we can scarcely understand the sign as purporting anything else, especially when we observe the lax method of insertion or omission of the same quantitative mark in other words. The antepenultimate δ is used indifferently in its simple form, or with the additional horizontal foot stroke, the precise import of which is yet undetermined; and, finally, the δ occurs in its normal shape, with the dot of a following hard α. The penultimate is also subject to modification, usually appearing under the form of the proper γ = δ, but at times bearing the foot stroke ordinarily reserved to distinguish the γ = δ, of assimilate outline; but to show the irregularities practised in this respect, this extraneous mark is added to the γ in the name, while on the same coin the special definition is rightly reserved to discriminate the γ = δ from the γ = δ in Tradatus. It must be added, however, that in some instances the superfluous foot stroke, in the penultimate of apollonides takes the form of an equally needless hard α medial.]



## 4.—□ Copper. Small coin.

OBSERVE:—Figure of Apollo, with bow and arrow, to the right.

Legend as in No. 1.

REVERSE:—Tripod. Legend as usual. Monogram, No. 36a.

Captain Robinson. Mr. Breveton, monogram 37 (†)

## 5.—○ Copper. Large coin. Plate xiv., fig. 6.

OBSERVE:—Apollo, with arrow, to the right. Legend as in No. 2.

REVERSE:—Tripod. Legend as in No. 1.

‘Ariana Antiqua,’ pl. iv., fig. 16. ‘Jour. des Sav.’ 1834, pl. fig. 6.

Variant. ○ Copper. Coin of inferior execution. Legends arranged on three sides of a square, instead of in the usual marginal circle.

Bactrian monogram, *ga*, with *d* or *e*.

Cunningham, ‘Jour. As. Soc. Beng.’ vol. ix., p. 567.

## 6.—□ Copper. Similar devices and legends to No. 5.

Monograms 63, 64.

## 7.—□ Copper. Plate xiv., fig. 7.

OBSERVE:—Apollo to the front, with the bow in the left and the arrow in the right hand. Legend as usual.

REVERSE:—Tripod. Legend as usual.

‘Jour. des Sav.’ 1834, i. 7.

Variants. Small coin. Pl. xiv., fig. 8; also ‘Ariana Antiqua,’ pl. iv., figs. 17, 18, and small coin No. 19.

Monograms Nos. 5, 6a, 21, 52a, 57, and the entire suite 65–75.

## 8.—□ Copper. Middle size.

OBSERVE:—‘Figure of Apollo standing to the left, clothed in the anaxyris, with chlamys behind, a quiver at his back; an arrow in his right hand, his left resting on his bow; inclosed in a frame of oblong globules, ΒΑΣΙΛΕΩΣ ΒΑ (?) . . . ΑΠΟΛΛΩΝΑΙΟΥ.’

REVERSE:—‘Tripod; in the field, a symbol which seems to be a military ensign.’  
Arianian inscription imperfect [*Apollodotaea*].

‘Ariana Antiqua,’ 291, quoting ‘Jour. des Sav.’ Dec. 1838, p. 752.

B. I. Monogram 286. Small coin, 35a. Col. Bush. Arian Monogram, No. 76.

## 9.—□ Copper. Small coin. Plate xlii., fig. 5. Unique.

OBSERVE:—Apollo as in No. 8. Legend altogether wanting.

REVERSE:—Symbol figured in the plate.

ARIAN LEGEND:—*Maharajasa Tridatasa Apollodotasa*. Col. T. Bush.

## 10.—□ Copper. Small coin.

OBSERVE:—Bull.

REVERSE:—Tripod, surrounded by a beaded margin. No Legends. B. I.

## 11.—□ Copper (middle size), indifferent execution.

OBSERVE:—Apollo (?) seated, to the right, a bow in left hand.

LEGEND:—ΒΑΣΙΛΕΩΣ ΙΟΘΗΠΕΩ . . . . . ΟΔΩΤΟΥ.

REVERSE: Tripod, within a frame. Legend imperfect, . . . *palodotasa* (?).

Monogram, No. 77.

Mr. E. C. Bayley.

## XIII. ZOILUS.

## 1.—Hemidrachma.

Obverse:—Head of king, to the right, with fillet.

Legend:—ΒΑΣΙΛΕΥΣ ΔΙΚΑΙΟΥ ΖΟΙΛΑΟΥ.

Reverse:—Hercules, as in Demetrius' coins, but the right hand holding the chaplet is not opened.

ARIAN LEGEND:—*Mithradates Ithrausiles Philotas*.

Monogram, No. 30.

Lady Headfort, No. 31. Captain Robinson, No. 46. Colonel Abbott, No. 78. Mr. Bayley, No. 79.

2.—Hemidrachma.<sup>1</sup> These coins have a great similitude, in their die execution, to the small Philopator coins of Apollodorus.

Obverse:—As No. 1.

Legend:—ΒΑΣΙΛΕΥΣ ΙΣΤΗΡΟΥ ΖΟΙΛΑΟΥ.

Reverse:—Thracian Minerva.

ARIAN LEGEND:—*Mithradates Trudatus Philotas*. Monogram No. 60.

Colonel Abbott. Mr. Bayley, No. 80.

## 3.—□ Copper.

Obverse:—Head of Hercules cetered with the lion's skin, to the right.

Legend:—ΒΑΣΙΛΕΥΣ ΔΙΚΑΙΟΥ ΖΟΙΛΑΟΥ.

Reverse:—Club, with bow in its case, surrounded by a chaplet.

ARIAN LEGEND:—*Mithradates Ithrausiles Philotas*.

Monogram No. 79.

Lady Headfort.

## 4.—○ Copper. Similar type to the Apollodorus coin, No. 3, with the addition of a small elephant at the back of the figure, in the field of the obverse. Legend as in No. 2, but the Greek epigraph is less correctly rendered. Monograms Nos. 81, 82, 83.

## 5.—○ Copper (small coin).

Obverse:—Elephant, to the right. Epigraph illegible.

Reverse:—Tripod.

ARIAN LEGEND:—*Mithradates Trudatus Philotas*.

Arian Monograms, *αβ*, *βδ*, and *ε* with *ζ*.

Colonel Bask.

## XIV. DIPONDUS.

## 1.—○ Copper. Plate xxviii, fig. 3.

Obverse:—Dionysus standing, to the front.

Legend:—ΒΑΣΙΛΕΥΣ ΙΣΤΗΡΟΥ ΔΙΟΝΥΣΑΟΥ.

Reverse. Arian Legend:—*Mithradates Trudatus Dipondus*.

Monograms Nos. 31, 31 with 2. Mr. Overton. 48s with 2.

'Ariana Antiqua,' pl. v., fig. 1.

<sup>1</sup> [Major Cunningham has published a degraded type of this coin, which he supposes to have formed part of 'a coinage (that) was re-issued on... perhaps imitated by the native chiefs in their own names.' 'Jour. As. Soc. Beng.' (1863) p. 622, and pl. xxv., fig. 11.]

## XV. DIONYSIUS.

- 1.—Hemidrachma (of inferior execution, similar in its aspect to the Philopater coins of Apollodotus).

Obverse:—Head with diad., to the right.

Legend:—ΒΑΣΙΛΕΥΣ ΣΩΤΗΡ ΔΙΟΝΥΣΙΟΥ.

Reverse:—Thessalian Minerva.

ARIAN LEGEND:—*Mithradates Tradatus Dionysius*.

Monogram (as in Apollodotus' coins), No. 66, standard type. Col. Abbott.

A second specimen gives the  $\Sigma$  in the name more after the form of a proper sigma. The outline of the  $\Sigma$  in the Arian legend, is also modified in the duplicate coin, which, however, bears the same monogram.

- 2.—□ Copper.

Obverse:—Apollo, to the right, as in Apollodotus' coins.

Legend:—ΒΑΣΙΛΕΥΣ ΣΩΤΗΡ ΔΙΟΝΥΣΙΟΥ.

Reverse:—Tripod. Arian Legend imperfect.

Monogram No. 84, consisting of Arian letters,  $\Sigma$  and  $\Delta$ . B.I., mon. 85. British Museum. 'Num. Chron.,' xvi., plate p. 108, fig. 6.

- 3.—□ Copper. Plate xlii., fig. 7. Unique.

Obverse:—As in No. 2, Apollodotus. No legend.

Reverse:—Device, as represented in the plate.

ARIAN LEGEND:—*Mithradates Tradatus Dionysius*.

Colonel Rush.

## XVI. LYSIAS.

- 1.—Hemidrachma. Plate xlii., fig. 4.

Obverse:—Head of king, with helmet in the shape of an elephant's head: similar to the Demetrius' type.

Legend:—ΒΑΣΙΛΕΥΣ ΑΝΙΚΗΤΟΥ ΛΥΣΙΟΥ.

Reverse:—Hercules standing, to the front, as in the Demetrius' prototype.

ARIAN LEGEND:—*Mithradates Apollodotus Lysias*.

'Ariana Antiqua,' pl. ii., fig. 9. Monogram 86. 'Ariana Antiqua,' pl. xxi., fig. 9. Monogram 87. B.I., monogram 86. Colonel Abbott. Monograms 86, 86, 87.

- 2.—Hemidrachma.

Obverse:—Head of the king, with the ordinary helmet.

Reverse:—Hercules, as above. The legend varies in the Arian definition of the name, which at times exhibits the initial vowel  $\alpha$ , and at others the letter  $\lambda$ , as the penultimate.

The seven specimens of this mintage that I have had an opportunity of examining all have the monogram No. 86. 'Num. Chron.,' xvi., plate p. 108, fig. 1.

- 3.—□ Copper. Plate xiv., fig. 12.

Obverse:—Bust of king, to the right, head uncovered, with a club resting on the shoulder.

Reverse:—Elephant, to the right, as in Heliodorus' coins. Legend as above, the name being usually spelt with a  $\lambda$ .

'Ariana Antiqua,' pl. ii., fig. 10. 'Num. Jour.,' vii., pl. ii., 22.

Monograms Nos. 86, 22, 86a.

## 4.—○ Copper.

OBSVERSE:—Bust of the king, as in No. 3.

REVERSE:—Elephant, to the right. (*Lisane*.)

Monogram No. 24a.

Colonel Bush.

## LYSIAS AND ANTIALKIDES.

## 1.—□ Copper.

OBSVERSE:—Bare head of king, to the right.

LEGEND:—ΒΑΣΙΛΕΥΣ ΛΥΣΙΟΥ ΑΥΤΟΚΤΟΥ.

REVERSE:—Cape and palm-branches of the Dioscuri.

ARIAN LEGEND:—*Makirajana Jagadharana Antialikidana*.

Captain Hay.

## XVII. ANTIALKIDES.

## 1.—Tetradrachma.

OBSVERSE:—Bare head of king.

LEGEND:—ΒΑΣΙΛΕΥΣ ΝΙΚΗΦΩΡΟΥ ΑΝΤΙΑΛΚΙΔΟΥ.

REVERSE:—Jove enthroned, with a small figure of Victory in his right hand; minute elephant in front, etc.

ARIAN LEGEND:—*Makirajana Jagadharana Antialikidana*.

Monogram No. 86.

Colonel Abbott.

## \*)—Hemidrachma. Similar types.

'Ariana Antiqua,' pl. ii, fig. 12.

Monograms Nos. 88, 22, 88.

## 2.—Drachma.

OBSVERSE:—Head of king, with Gancia.

REVERSE:—As in No. 1.

Monogram No. 31. B.I.

## \*)—Hemidrachma. Plate xviii, fig. 2.

In some specimens the small elephant faces the seated figure.

Monograms Nos. 88, 22, 31, 80.

'Ariana Antiqua,' pl. ii, fig. 11.

## 3.—Hemidrachma.

OBSVERSE:—Head, with the ordinary crested helmet.

REVERSE:—Device as usual.

Monograms 88, 86.

'Ariana Antiqua,' No. 3, p. 277.

## 4.—○ Copper.

OBSVERSE:—Bust, with uncovered head. The right hand grasps the thunderbolt.<sup>1</sup>

REVERSE:—Cape and palms of the Dioscuri.

Monograms 8, 31, 86, 87.

'Ariana Antiqua,' No 6, p. 279.

## 5.—□ Copper. Plate xiv, figs. 9, 10, 11.

Similar devices.

These two classes of coins vary occasionally in the subordinate typical details,<sup>2</sup> and the Arian definition of the name is irregular in the general series, in the interchange of the dental and cerebral *δ*, as the penultimate consonant. Monograms, Nos. 8a, 22, 30 (?), 49a, 87, 87a.

<sup>1</sup> [Major Cunningham supposes this to be the head of 'Jupiter Nioephorus,' *Jour. As. Soc. Beng.*, vol. ix., p. 874.]

<sup>2</sup> [Ex. Gr., 'Num. Chron.' vii., pl. ii, fig. 21.]

## XVIII. AMYNTAS.

- 1.—Didrachma. Much damaged. (Weight, 128 grs.)

OBSERVE:—Helmeted head, to the right.

LEGEND:—ΒΑΣΙΛΕΥΣ ΝΙΚΑΤΟΡΟΣ ΑΜΥΝΤΟΥ.

REVERSE:—Thessalian Minerva, to the left.

ARIAN LEGEND:—*Makridzeas Japhethian Amintas.*

British Museum. Monogram No. 59a.

'Num. Chron.,' xvi., plate p. 108, fig. 2.

- 2.—□ Copper. Plate xxii., fig. 1.

OBSERVE:—Head of king, to the right.

REVERSE:—Minerva armed, to the left.

Monogram No. 88.

'Ariana Antiqua,' pl. ii., fig. 14.

## XIX. ARCHERIS.

- 1.—Tetradrachma.

OBSERVE:—Bare head.

LEGEND:—ΒΑΣΙΛΕΥΣ ΑΡΧΑΙΟΥ ΝΙΚΗΦΟΡΟΥ ΑΡΧΕΡΙΟΥ.

REVERSE:—Jupiter standing to the front, with spear and thunderbolt.

ARIAN LEGEND:—*Makridzeas Dromichaea Japhethian Archerys.*

Monogram No. 89.

Colonel Abbott.

- 2.—Hemidrachma. Plate xxvii., fig. 1.

Similar types and legends.

'Ariana Antiqua,' pl. ii., fig. 8. Monogram No. 88.

- 3.—Tetradrachma.

OBSERVE:—Helmeted head.

REVERSE:—As No. 1.

Monogram No. 59a.

Colonel Abbott.

- 4.—Hemidrachma.

OBSERVE:—Bust of the king with bare head, to the left, a javelin in the right hand, as in one of the common classes of Alexander's coins (No. 2.)

REVERSE:—Jove (Neptune?) as above.

Monograms, Nos. 8a with 99.

'Ariana Antiqua,' pl. xxi., fig. 10.

- 5.—□ Copper.

OBSERVE:—Victory, to the right, extending a chaplet.

REVERSE:—An owl. Monogram 89.

R. Rochette, 'Jour. des Sav.,' 1839, p. 104. 'Ariana Antiqua,' p. 260.

- 6.—□ Copper. Similar devices. British Museum monograms, Nos. 89 and 89a.

'Num. Chron.,' vol. xvi., pl. p. 108, fig. 3.

<sup>1</sup> [I regret to say that my available notes on the typical details of Colonel Abbott's coins are very imperfect. I was greatly pressed for time on the only opportunity I had of inspecting his rich and varied collection; and, at the moment, entertained no design of publishing the result of my scrutiny; hence my memoranda refer to doubtful and difficult readings, special coincidences of design, and monogrammatic data, rather than to the *de* specifications ordinarily demanded by exact numismatic science. Further, I have to note, that my compulsory haste denied me even a bare right of the copper series of a cabinet whose silver specimens promised so much: and, indeed, whose contents in that metal, whether in regard to discretion of selection or perfection of preservation, are unequalled by any public or private collection I have hitherto examined.]

## XX. MENANDER.

- 1.—Didrachma. (E. I. C. coin. Weight, 151·6 grs.)  
 Obverse:—Bare head of king, to the right.  
 Legend:—ΒΑΣΙΛΕΥΣ ΕΠΙΦΑΝΕΣ ΜΕΝΑΝΔΡΟΥ.  
 Reverse:—Thessalian Minerva, to the left.  
 Arian Legend:—*Midhrachmā Fradastā Menandrus*.  
 Monograms, 2 and 30. Mr. Brereton, monogram, 88.  
 'Ariana Antiqua,' pl. iii., fig. 13.
- \*—Hemidrachma. Plate iii., fig. 3. Same types. Monograms, 13a, 18 associated with 98 on the same field, 22c, 31, 46a repeated on the same coin, 79, 86 repeated, 86 with Γ, Ε, and Σ, severally associated on the same field, 91, 97, 93, 94, 95.  
 'Ariana Antiqua,' pl. iii., fig. 14.
- 2.—Didrachma (rust). British Museum.  
 Obverse:—Bare head of king, to the left; the right hand grasps a javelin.  
 Reverse:—Minerva to the left. Monogram 27.
- \*—Hemidrachma. Same types. Monograms, 88, 22, 27, 31, 46, 46a, 86 with Σ.
- \*—Hemidrachma. Pl. xiv., fig. 1. Similar devices, but Minerva faces to the right, and the legends are arranged in one continuous circular scroll.  
 Monograms, 27, 31a, 46.
- 3.—Didrachma.  
 Obverse:—Head of king with helmet, to the right.  
 Reverse:—Minerva. Lady Headfort.
- \*—Hemidrachma. Monograms, 84, 22, 22c, 27, 31, 46a repeated, 86, with Σ, 91.  
 'Ariana Antiqua,' pl. iii., fig. 16.
- 4.—Hemidrachma.  
 Obverse:—Head of king, to the left, with helmet and javelin.  
 Reverse:—Minerva.  
 'Ariana Antiqua,' pl. iv., fig. 2.
- 5.—Hemidrachma.  
 Obverse:—Helmeted head, as in No. 3.  
 Reverse:—An owl. Monograms, 27, 31.
- 6.—□ Copper. Large coin. Weight, 558·5 grains.  
 Obverse:—Helmeted head of king, to the right.  
 Reverse:—Horse, free. Monogram, No. 30 (?). Mr. Brereton.
- 7.—□ Copper. Weight, 316 grains.  
 Obverse:—Bull's head, to the front.  
 Reverse:—Tripod.  
 Monograms, 8a; another coin (in weight, 228 grs.), 8a; a third, No. 31a, with an Arian α in the field. Mr. Brereton.
- 8.—□ Copper. Plate xiii., fig. 8. Weight, 342 grains.  
 Obverse:—Bare head, to the right.  
 Reverse:—A dolphin. Monogram 30, with 84 on the field.  
 'Ariana Antiqua,' pl. iv., fig. 3.

## 9.—□ Copper.

Obverse:—Bare head, to the left, with javelin, as in No. 2.

Reverse:—Minerva, to the right. Monograms, 27, 31, 71.

'Ariana Antiqua,' pl. iv., fig. 7.

## 10.—□ Copper. Plate xiv., fig. 2.

Obverse:—Helmeted head, to the right.

Reverse:—Winged figure of Victory, to the right, with palm-branch and wreath. Monograms, 27, 31, 46, 71, 93.

'Ariana Antiqua,' pl. iv., figs. 5, 6.

## \*)—□ Copper.

Reverse:—Victory, to the left.

Monograms, 31a, with B. Another coin has B alone.

'Ariana Antiqua,' pl. iv., fig. 4.

There are other subordinate varieties of these coins, see 'Ariana Antiqua,' p. 285.

## 11.—□ Copper. Plate xxii., fig. 8.

Obverse:—Helmeted head, to the right.

Reverse:—Owl.

'Ariana Antiqua,' pl. iv., fig. 8.

## 12.—□ Copper. Plate xxii., fig. 5.

Obverse:—Helmeted head, to the right.

Reverse:—Shield of Minerva. Monograms, H (?), 46, 46a.

'Ariana Antiqua,' pl. iv., fig. 12.

## 13.—□ Copper. Plate xxii., fig. 9.

Obverse:—Bull's head.

Reverse:—Palm branch. Monogram, H.

'Ariana Antiqua,' pl. iv., fig. 9.

## 14.—□ Copper. Plate xiv., fig. 2.

Obverse:—Elephant's head.

Reverse:—Club of Hercules.

Monograms, 27, associated in the several instances with the isolated letters

A A; 31, ditto, A Δ. Colonel Bush, *Arian monogram*, &c.

'Ariana Antiqua,' pl. iv., fig. 10.

## 15.—□ Copper. Plate xxii., fig. 7.

Obverse:—Wheel.

Reverse:—Clink.

'Ariana Antiqua,' pl. iv., fig. 11.

## 16.—□ Copper.

Obverse:—Minerva to the left, with a spear resting on her left arm—shield in front of the knee—right hand extended.

Legend:—ΒΑΣΙΛΕΥΣ ΔΙΚΑΙΟΥ ΜΕΝΑΝΔΡΟΥ.

Reverse:—Indian lion, to the left.

ARIAN LEGEND:—*Makdrupian Dikraulian Menandros*. British Museum.

Quoted also by Wilson, 'Ariana Antiqua,' p. 317, from an imperfect coin described by M. R. Rochette, 'Jour. des Sav.' Dec. 1838, p. 761.

## 17.—□ Copper.

Obverse:—Elephant, to the left.

Legend imperfect, but exhibiting traces of the name of Menander:—

ΒΑΣΙΛΕΥΣ ΙΟΥΝΠΟΙ ΜΕΝΑΝΔΡΟΥ.

Reverse:—An ankus (or elephant-goad).

Arian Legend imperfect:—[*Makdrupian Trade[stam]*] . . . .

Monogram, No. 96.

Mr. Bayley.



## XXI. STRATO.

## 1.—Didrachma. (Cast).

OBSERVE:—Helmeted head of the king, to the right.

LEGEND:—ΒΑΣΙΛΕΥΣ ΕΠΙΦΑΝΟΥΣ ΣΩΤΗΡΟΣ ΣΤΡΑΤΩΝΟΣ.

REVERSE:—Thessalian Minerva, to the left.

ARIAN LEGEND INCOMPLETE:— . . . *Prædictæ Tradatæ Stratonæ.*

Monogram, 20a.

Capt. Hay

## 2.—Hemidrachma.

OBSERVE:—Bare head, to the right.

LEGEND:—ΒΑΣΙΛΕΥΣ ΕΠΙΦΑΝΟΥΣ ΣΩΤΗΡΟΣ ΣΤΡΑΤΩΝΟΣ.

REVERSE:—Minerva.

ARIAN LEGEND:—*Makrogyas Prædictæ Tradatæ Stratonæ.*

Two specimens. British Museum. Monogram, No. 8a.

## 3.—□ Copper.

OBSERVE:—Apollo, as in Apollodotus' coin, No. 7.

REVERSE:—Triped.

E. I. H., monogram, No. 8a.

## 4.—□ Copper.

OBSERVE:—King's bust, with club resting on his right shoulder.

LEGEND:—ΒΑΣΙΛΕΥΣ ΣΩΤΗΡΟΣ ΣΤΡΑΤΩΝΟΣ.

REVERSE:—Victory.

ARIAN LEGEND:—*Makrogyas Tradatæ Stratonæ.*

Monograms, No. 22a (1), 22a.

Mr. Bayley.

## 5.—□ Copper.

OBSERVE:—Type as in No. 4.

LEGEND:—ΒΑΣΙΛΕΥΣ ΣΩΤΗΡΟΣ ΔΙΚΑΙΟΥ ΣΤΡΑΤΩΝΟΣ.

REVERSE:—Type as in No. 4.

ARIAN LEGEND:—*Makrogyas Tradatæ Ithramikæ Stratonæ.*

Monogram No. 22a. British Museum. Other monograms, Nos. 22 and 22b.

## 6.—○ Copper.

OBSERVE:—Bare head of king to the right, as in the silver hemidrachmas.

LEGEND, imperfect:—ΒΑΣΙΛΕΥΣ ΕΠΙΦΑΝΟΥΣ ΣΩΤΗΡΟΣ ΣΤΡΑΤΩΝΟΣ.

REVERSE:—Victory with (palm branch?) and) diaphia, to the right.

ARIAN LEGEND:—*Makrogyas Prædictæ Tradatæ Stratonæ.*

Monogram 108a.?

Colonel T. Bush.

## XXII. ANATROCLEIA

(WIFE OF STRATO).

## 1.—□ Copper. Plate LXVII, fig. 2.

OBSERVE:—Female head, helmeted.

LEGEND:—ΒΑΣΙΛΙΣΣΑ ΑΝΑΤΡΟΚΛΕΙΑΣ ΑΓΑΘΟΚΛΕΙΑΣ.

REVERSE:—Hercules with club, seated.

ARIAN LEGEND:—*Makrogyas Tradatæ Ithramikæ Stratonæ.*

Monogram No. 22b. 1

Mr. Bayley.

'Ariana Antiqua,' pl. vi., fig. 10.

I notice in this place, irrespective of the order of time, a series of debased derivatives from the normal type of Strato's hemidrachmas (No. 2 *supra*), which are peculiarly identified with the original mintage, not only in obvious imitation, but in

the progressive degradation of certain associate pieces bearing that monarch's name, which have been found in company with the only considerable hoard of these coins that has as yet been discovered.<sup>1</sup>

The serial class is remarkable in that, while continuing the same standard device as the prototype, it eventually lowers the title of *Maharaja*, on the reverse, into that of *Satrap*; and it is further interesting in the exemplification of the speedy obsolescence of the Greek legends, while the Arian writing remains well-defined and intelligible, as in the parallel instance of the money of the Sak kings, where the local PALT appears in the highest perfection in the presence of the meaningless repetition of Greek outlines on the obverse. In its local aspect also, this particular hoard is instructive, as, although solitary specimens of these and kindred issues may have found their way to other parts of the country, yet the collection of so many successional coins, unmingled with foreign currencies, would seem to indicate an ordinary accumulation of every-day life, either made on the spot or gathered from the circulating medium of no remote locality.

Major Cunningham, in a paper in the 'Journal of the As. Soc. Beng.' (1854, p. 679), with persevering assiduity, endeavours to reconcile the degraded Greek legends with the indigenous inscriptions on the reverse, and essays to discover owners for the names—which end but vaguely even in their Arian form—amid the Hadda dynasty of Hastinapur and Delhi.<sup>2</sup>

Passing over the progressive steps of barbarization in the jumbled Greek legends of all those coins that bear the name of Strato on the reverse, and rejecting unconditionally the claims of Major Cunningham's ΠΕΙΣΑ ΣΤΡΑΤΩΣ to any separate identity, I come to the class of pieces which bear on their obverse variously the titles of ΒΑΣΙΛΕΥΣ ΒΑΣΙΛΕΩΝ and ΒΑΣΙΛΕΥΣ ΣΥΝΤΗΡΩΣ, followed by portions of a name or title which reads as ΠΑΞ and ΠΑΞΑΒΑ. On the reverse this money exchanges the legend of *Maharajah Pratapa Stratus for Chetrapata Apretichakra Banjabala*.<sup>3</sup> Whether the ΠΑΞΑΒΑ of the obverse legend be an imperfect attempt at a Greek rendering of the native name is of but little consequence, as we can hardly reconcile Banjabala's humble titles on the reverse with the higher designation applied to Strato himself, or the more pompous ΒΑΣΙΛΕΥΣ ΒΑΣΙΛΕΩΝ, assumed by that monarch's successors, which figure indifferently in contact with and contrast to the grade of *Satrap*, to whose dignities alone the former limits his claim. In brief, the coins would merely seem to exemplify an oft-recurring phase in Indian Imperialism, where the decline of the central power encourages, and at times necessitates, the effective assertion of independence by the local rulers, however much they may avoid or delay the overt act of positive disavowal of allegiance.

The monograms on the debased coins of Strato are entered under Nos. 97 to 99. Those on Banjabala's money are reproduced as Nos. 100 to 104.<sup>4</sup>

<sup>1</sup> [Major Cunningham observes: 'The greatest number were procured at Mathura, on the Jumna, and were said to have been found in the ruins of the city, along with some rude hemidrachmas of Strato' ('Jour. As. Soc. Beng.,' vol. vii., 1854, p. 681). I do not know how many of these mixed pieces Major Cunningham obtained on this occasion, but my native coin-collector, who glanced part of the remainder, brought me 84 coins, more than half of which number were Strato's.]

<sup>2</sup> [See Useful Tables *infra*. Table xix. *Bajpoda*.]

<sup>3</sup> [Major Cunningham makes it *Bjabala*, but the better preserved coins give the suffix *a* in full distinctness. His translation of *Apretichakra*, as 'invincible with the discus,' is satisfactory.]

<sup>4</sup> [No. 101 is interpreted by Major Cunningham as *Hasti* for *Hastinapura*, the ancient Hindu capital on the Ganges above Meerut.]

## XXII.—HIPPOCRATES.

## 1.—Didrachma.

Obverse:—Bare head of king, to the right, with fillet.

Legend:—ΒΑΣΙΛΕΥΣ ΕΩΤΗΡΟΣ ΗΠΙΟΤΡΑΤΟΥ.

Reverse:—Standing figure of Demeter, with crested helmet, right hand extended, the left supports a cornucopia.

ARIAN LEGEND:—*Mithraean Tradition Hippocratess.*

Monogram, No. 85.

Mr. Bayley and B.M. 'Num. Chron.,' vol. xvi, pl. p. 108, fig. 5.

\*)—Hemidrachma. Similar types. Monogram, No. 85. Captain Hay.

## 2.—Didrachma. (British Museum coin, weight 139 gr.)

Obverse:—Bare head of king, to the right, with fillet.

Legend:—ΒΑΣΙΛΕΥΣ ΜΕΓΑΛΟΥ ΕΩΤΗΡΟΣ ΗΠΙΟΤΡΑΤΟΥ.

Reverse:—Helmsted figure on horseback, to the right; horse in motion.

ARIAN LEGEND:—*Mithraean Tradition Habiliass Japitass Hippocratess.*

Monogram, No. 105.

Mr. Bayley, No. 105, with Arion is on the field. Captain Hay, 105a with *h*, and No. 106. M. N. (V) Col. Abbott, 38a. British Museum, No. 47c. 'Num. Chron.,' vol. xvi, pl. p. 108, fig. 4.

\*)—Hemidrachma. Similar types. Monogram, 105a. Mr. Breton.

## 3.—Didrachma. (British Museum coin; weight, 144·5 grains).

Obverse:—Device and legend as in No. 1.

Reverse:—Horseman, motionless. Legend as in No. 2.

Monogram, No. 105, with the several adjuncts of No. 106, and the detached Arian letters *h* and *pe*. Mr. Bayley, British Museum, etc.

## 4.—□ Copper.

Obverse:—Apollo standing, to the right. Legend as in No. 1.

Reverse:—A tripod. Legend as in No. 1.

Monogram, 85.

Mr. Bayley.

## 5.—□ Copper.

Obverse:—Jove enthroned. Legend as in No. 1.

Reverse:—Horse, standing, to the left.

ARIAN LEGEND:—*Mithraean Tradition Japitass Hippocratess.*

Cunningham, 'Jour. As. Soc. Beng.,' vol. xi., pl. fig. 9.

## XXIII. TELEPHUS.

## 1.—Major Cunningham has made public the only known coin of this king, ('Jour. As. Soc. Beng.,' vol. xi., p. 153), which he describes as follows:—

Obverse:—'An ancient giant, full front, with snaky legs, which curl upwards on each side.'

Legend:—ΒΑΣΙΛΕΥΣ ΕΥΕΠΙΕΤΟΥ ΤΗΛΕΦΟΥ.

Reverse:—'A draped male figure standing, to the left, his head crowned with rays, and holding in his right hand a spear; to the right, a clothed female figure, with a crescent on her head.'

ARIAN LEGEND:—*Mithraean . . . Iremass Teliphass.*

Monogram, No. 107.

## XXIV. HERMES.

- 1.—Didrachma. Plate xviii., fig. 1. (Selected British Museum coins; weight, 140 and 144 grains).

Obverse:—Head of king, to the right.

Legend:—ΒΑΣΙΛΕΥΣ ΕΥΘΥΠΟΥ ΕΡΜΑΙΟΥ.

Reverse:—Jove enthroned, right hand extended.

ARIAN LEGEND:—*Mithrojjana Tradatana Hermapana.*

Monogram, E. I. C., Nos. 173, 36, 1084.

'Ariana Antiqua,' pl. v., fig. 3.

British Museum monograms, 324, 108, 108a, associated with 110. Mr. Brereton, 109. Colonel Bush, 108c.

- \*)—Hemidrachma. Similar types. Monograms, British Museum, 21, 334, 48c, 99a, 111, 112. B. I. 112. Mr. Brereton, 224. Captain Hay, 114. Mr. Prentiss, 53a.

'Jour. des Sav.,' 1823, l. 13. 'Ariana Antiqua,' pl. v., fig. 3.

## HERMES AND CALLIOPE.

- 2.—Hemidrachma.

Obverse:—Male and female heads, to the right.

Legend:—ΒΑΣΙΛΕΥΣ ΕΥΘΥΠΟΥ ΕΡΜΑΙΟΥ ΚΑΙ ΚΑΛΛΙΟΠΗΣ.

Reverse:—Horseman, as in Antimachus' coin.

ARIAN LEGEND:—*Mithrojjana Tradatana Hermapana*; and at the bottom, in the reverse direction, *Kalliopeja*.

'Ariana Antiqua,' pl. xxi., fig. 14. Capt. Robinson, Mr. Bayley, Mr. Brereton, etc., all have the same monogram, No. 108a.

- 3.—○ Copper. Plate xviii., figs. 2, 3, 4. Identical in type and legends with No. 1.

'Ariana Antiqua,' pl. v., figs. 4, 5, 6.

Monograms, No. 116, with Bactrian letters *ia*, and No. 115a, with the several Bactrian letters classed under No. 116.

- \*)—○ Copper. Small coins. Similar types.

- 4.—□ Copper. Plate xxviii., fig. 11.

Obverse:—Bust of king, with curiously arranged head dress.

Legend:—ΒΑΣΙΛΕΥΣ ΕΥΘΥΠΟΥ ΕΡΜΑΙΟΥ.

Reverse:—Horse standing to the right.

ARIAN LEGEND:—*Mithrojjana Tradatana Hermapana.*

Monograms, 21, 109.

'Ariana Antiqua,' pl. v., fig. 7.

- \*)—Variety. 'Ariana Antiqua,' pl. xxi., fig. 15. Head-dress as in Amyntas' coin, pl. xxiii., fig. 1, monogram 109.

Extra Monograms of Hermes:—204, 244, 364, 38, 1084, with Arian letters *h*, *s*; 115a, with elongated downstroke of *τ* (or 1154), associated with the Bactrian letters *trd*, *τ*, *ak*, *ak*, and *u* (?); also 117 to 119 inclusive.

## XXIV\*. SE-HERMES.

- 1.—○ Copper. Plate xviii., fig. 9; and pl. xxviii., fig. 10.

Obverse:—Head of king, to the right.

Legend, imperfect:—BAZIAEΩΣ ITHPΩΣ EY EPMAIOY.

Reverse:—Hercules standing with his club resting on the ground.

ARIAN Legend:—*Dhama Phidima Kajula Kozasa Kuchanayutugan.*

'Ariana Antiqua,' pl. v., figs. 8, 9, etc.

These coins are usually deficient in monogram. In one case I notice the Bactrian combination No. 63 on the reverse field.

Major Cunningham conjectures these mintages to have formed a portion of the issues of Kozula Kadphises (No. xxvi.), struck during the lifetime of Hermes.—'Jour. As. Soc. Beng.,' 1854, p. 700.

## XXV. MAVAS.

- 1.—Didrachma. (Weight, 151·4 grains)

Obverse:—Male figure, to the front; right arm extended, the left supports a spear.

Legend:—BAZIAEΩΣ BAZIAEΩN METAAYT MAYOT.

Reverse:—Victory, with chaplet, to the right.

ARIAN Legend:—*Bafadrangas Mahatas Mava.*

Monogram, No. 384.

British Museum, 384. Capt. Robinson, No. 38a. Lady Sale's coin (weight, 148 grains), monogram, No. 39.

- \*)—Hemidrachma. Similar types.

Capt. Robinson, monogram 38a. Capt. Hay, No. 64.

- 2.—Didrachma.

Obverse:—A biga, with horses at speed. The driver wears a helmet; the chief figure holds a spear, a nimbus surrounds his head.

Reverse:—Jove enthroned, as in Hermes' coins, with triple-pointed spear (trident?),

Monogram, No. 107a

Capt. Robinson.

- 3.—○ Copper. Plate xiii., fig. 4.

Obverse:—Elephant's head.

Reverse:—Caduceus.

Legend:—BAZIAEΩΣ MAYOT.

Monogram, No. 89.

British Museum. 'Ariana Antiqua,' pl. viii., fig. 11

- 4.—□ Copper (small coin).

Obverse:—Apollo, to the front, as in Apollodotus' coins: arrow in the right hand and bow in the left hand.

Legend:—BAZIAEΩΣ MAYOT.

Reverse:—Tripod.

ARIAN Legend:—*Mahdregan Mava.*

British Museum. Mr. Brereton

## 5.—□ Copper.

OBVERSE:—Female figure, to the front, with spear; crescent above the head.

Two six-pointed stars or constellations appear in the upper part of the field, one on each side of the figure.

LEGEND:—BAIARON BAIARON METAAOT MATOT.

REVERSE:—Victory with chaplet, to the left.

ARLAN LEGEND:—*Jadiraiaa Mahiana Manna.*

Monogram, No. 120. British Museum, and less perfect coin B. I.

## 6.—□ Copper.

OBVERSE:—Juve enthroned, with small figure at the side.

REVERSE:—Female figure, as on the obverse of No. 5.

Monogram, No. 120. 'Ariane Antiqua,' p. 315.

## Variety.

REVERSE:—Figure as above; but the crescent is strangely transformed, and the stars on the field are wanting.

Monogram 120.

Mr. Brereton.

7.—□ Copper.<sup>1</sup>

OBVERSE:—Figure clothed in skins, with sinistras.

REVERSE:—Indian bull, to the left.

British Museum. Monogram, No. 89.

Monogram, No. 82.

Mr. Bayley and Capt. Robinson.

## 8.—□ Copper. Plate XIII., fig. 11.

OBVERSE:—Male figure, with club and birdskin; bowing robes, etc.

Monogram, No. 121.

REVERSE:—Victory, with loose garments (similar to the figure on the obverse), and a varied style of chaplet.

<sup>1</sup>'Ariane Antiqua,' pl. viii., fig. 10. Monogram, 122. B. I. Monogram, 123.

## 9.—□ Copper. Pl. xv., fig. 11.

OBVERSE:—Elephant.

REVERSE:—Seated figure.

Monogram, No. 1164.

Mr. PRER.

<sup>1</sup>'Jour. des Sav.,' 1839.

## 10.—□ Copper. Pl. xv., fig. 7.

OBVERSE:—Male figure, to the left, in flowing garments, holding a chaplet.

REVERSE:—Indian lion, to the right.

B. I. Monogram, 112a.

## 11.—○ Copper.

OBVERSE:—Hercules to the front, with club and lion-skin, the right hand rests upon the hip.

REVERSE:—Indian lion, to the left.

Monogram, No. 80.

Mr. Brereton.

<sup>1</sup> [A coin of this type is engraved in Mr. H. T. Prinsep's 'Historical Results,' pl. v., fig. 1.]

## 12.—□ Copper.

Obverse:—Neptune, with trident, treading upon a prostrate figure.

Reverse:—Figure surrounded with branches.

Monogram, No. 120.

Colonel Nuthall. Mr. Brewster, and 'Ariens Antiqua,' p. 314.

## 13.—□ Copper.

Obverse:—Neptune, with the right foot placed on a prostrate figure as in No. 12; the left hand rests on a trident, while the right is raised in the act of hurling the thunderbolt.

Reverse:—As in No. 12. Monogram, illegible.

Lady Elliot.

## 14.—□ Copper.

Obverse:—As No. 13, except that Neptune holds a palm-branch in the left hand in lieu of the trident.

Reverse:—As No. 13.

Monogram, a modification of No. 1166.

Mr. Bayley.

## 15.—□ Copper.

Obverse:—Horseman, with a fold of his dress flying loose behind him.

Monogram, illegible.

Reverse:—Helmeted figure, in loose garments, moving to the right, holding a guntlet in the right and a spear in the left hand.

Monogram, *msl.*

Mr. Bayley.

## 16.—□ Copper.

Obverse:—Horseman, with spear.

Reverse:—Winged Victory, to the left, holding a diadem in the right hand.

Monogram, No. 1144.

Mr. Bayley.

## 17.—□ Copper.

Obverse:—Standing male figure, to the front; right arm uplifted, in the left a club. Monogram, No. 1156, with an Arian *ā*.

Reverse:—Indian bull, to the right.

Monogram, No. 1156.

Mr. Bayley.

A second coin, in the possession of Mr. H. Brewster, gives the name clearly as MAT-Y.

## 18.—□ Copper.

Obverse:—Elephant.

Reverse:—Indian bull.

Mr. Brewster. Capt. Hay.

## XXVI. KASHMIR.

## 1.—Copper. Plate xxviii., fig. 12.

Obverse:—Head as in the Sa-Hermes' coins.

Legend:—KOPTHAD [Variety, KOPONAD] KOLLOYAD KASPHIZOT.

Reverse:—Hercules as above.

Arian Legend:—*Dhama Phidasa Kujula Kasasa Kushanoyatagasa.*<sup>1</sup>

Monograms, Arian *ā* with *r*.

'Ariens Antiqua,' pl. xi., figs. 10, 11.

<sup>1</sup> [Major Cunningham, in the 'Journ. As. Soc. Beng.', vol. vii. of 1854, p. 709, transcribes this legend as follows:—*Kujula Kasasa Kushanoyatagasa Dhama Phidasa.*



## XXVI. KOTOLA KADAPHES.

- 1.—○ Copper small coin. Plate xviii., figs. 13, 14, 15; and pl. xxviii., figs. 13, 14.  
 Obverse:—Youthful head.

Legend:—ΚΟΖΟΛΑ ΚΑΔΑΦΕΣ ΧΟΡΑΝ [Υ] ΛΑΒΟΥ.

Reverse:—A Scythic figure.

ARIAN Legend:—Khambojam Jamana Kujula [Kujula?] Kapheta  
*Sachla dhani padana.*

Monogram, No. 124. Some specimens add the Bactrian letter inserted  
 in the plate under No. 125.

\* *Ariana Antiqua*, pl. xi., fig. 14.

## XXVI. KODES.

- 1.—Hemidrachma. Plate xiii., figs. 11, 12, 13.

Obverse:—Barbarously executed head of king.

Legend:—ΚΩΔΟΥ.

Reverse:—Erect figure, with daima issuing from the shoulders; the right hand  
 rests upon a spear.

Legend:—ΠΑΝΟΡΟΥ ΜΑΚΑΡ.

\* *Jour. des Sav.*, 1834, pl. fig. 6; \* *Ariana Antiqua*, pl. ix., figs.  
 1, 2, 3, 4.

- 2.—Hemidrachma. Plate xviii., figs. 16, 17, 18.

Obverse:—Head as above.

Reverse:—Horse's head. ΚΩΔ.

\* *Jour. des Sav.*, 1834, pl. fig. 9. \* *Ariana Antiqua*, pl. ix., figs. 5, 6, 7.

## XXVII. VORONES (AND AZAS).

## CLASS A.

I understand that Major Cunningham has discovered coins with the above combination of names. The specimens are engraved in his unpublished plates, but I do not consider myself authorized to quote them in any detail beyond this notice of the interesting historical fact they suffice to substantiate.

## VORONES (AND SPALAKHES).

## CLASS B.

- 1.—Didrachma.

Obverse:—Arab horseman with spear at the charge, to the right.

Legend:—ΒΑΣΙΛΕΥΣ ΒΑΣΙΛΕΩΣ ΜΕΤΑΛΟΥ ΟΥΚΟΥ.

Reverse:—Jupiter with spear and bolts.

ARIAN Legend:—Makiraja Bhakta Dharmakam Spalakhesa.

Monogram, No. 534.

Capt. Robinson.

- 2.—Hemidrachma. Pl. xv., fig. 5. Similar types and legends.

Monogram, 534, 126.

\* *Ariana Antiqua*, pl. viii., fig. 8.

The nearly parallel epigraph on Kuzula Kadaphes' money is transliterated and translated thus—*Kuzhanya Yathanya Kujula Kapheta Sachla dharmapadana*, 'Coin of the king of the Khamang Kujula Kapheta, the crown of the true Dharma.']

## 2.—□ Copper. Plate xv., fig. 16.

OVERSE:—Hercules, with club and lion's skin, right hand raised to the head.

LEGEND:—ΒΑΣΙΛΕΥΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΣΤΥ ΟΝΟΝΟΥ.

REVERSE:—Minerva, to the left, armed with shield and spear, right arm extended.

ARIAN LEGEND:—*Maharaja Bhadrta Dhrumilaka Spalashirasa.*

Monogram, No. 126. B.I. 126a.

‘*Jour. des Sav.*, 1835, pl. ii., fig. 25. ‘*Ariana Antiqua*,’ pl. viii., fig. 9.

## 3.—○ Copper.

OVERSE:—As in No. 2.

REVERSE:—Device as in No. 2.

ARIAN LEGEND:—*Spalaka Bhadrta Dhrumilaka Spalashirasa.*

Monogram, 126.

Mr. Bretton.

## VOXONES (AND SPALAGIDAMES, SON OF SPALAGONES.

## CLASS C.

## 1.—Hemidrachma.

OVERSE:—Aras' horseman, with spear.

LEGEND:—ΒΑΣΙΛΕΥΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΣΤΥ ΟΝΟΝΟΥ.

REVERSE:—Jupiter, with spear and lotus.

ARIAN LEGEND:—*Spalaka Putrasa Dhrumilaka Spalagidames.*

Monogram, British Museum coin, 127. Cf. Sykes, 132a. Mr. Bretton, 42c, 128, 128a.

## 2.—□ Copper.

OVERSE:—Hercules, as in No. 2, class B.

LEGEND:—ΒΑΣΙΛΕΥΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΣΤΥ ΟΝΟΝΟΥ.

REVERSE:—

ARIAN LEGEND:—*Spalaka Putrasa Dhrumilaka (Spalagidames).*

Monogram, 128.

Mr. Bretton.

## SPALAGIDES AND ARAS.

## CLASS D.

## 1.—Didrachma.

OVERSE:—Aras' horseman.

LEGEND:—ΒΑΣΙΛΕΥΣ ΜΕΓΑΣΤΥ ΠΙΛΑΙΠΙΟΥ.

REVERSE:—Jove, as above.

ARIAN LEGEND:—*Maharajasa Mahatitaka Arasa.*

Monogram, 130.

Mr. Frere.

## \*)—Hemidrachma. Similar types.

Monogram, 129, with Bactrian letters, &amp;c.

Mr. Bretton.

## 2.—○ Copper.

OVERSE:—Aras' horseman.

LEGEND:—ΒΑΣΙΛΕΥΣ ΜΕΓΑΣΤΥ ΠΙΛΑΙΠΙΟΥ.

REVERSE:—A bow and arrow.

ARIAN LEGEND:—*Maharajasa Mahatitaka Arasa.*

Monogram, 127b.

Mr. Bayley.

## CLASS Cc.

## XXVIII. SPALYRION OF SPALAGADANON (alone).

## THE BROTHER OF THE KING.

- 1.—□ Copper. Pl. iv., fig. 9; pl. xviii., fig. 8.

OBSERVE:—Aria's horseman.

LEGEND:—ΧΑΑΤΡΙΩΣ ΑΙΡΑΝΟΥ ΑΔΕΛΦΟΥ ΤΟΥ ΒΑΣΙΛΕΥΣ.

REVERSE:—Hercules seated on a rock.

ARIAN LEGEND:—*Spalteryon patrōn Dāruwian Spalagadanon.*

Monograms, Nos. 48c, 127c, 128. 'Ariana Antiqua,' pl. viii., fig. 12.

## CLASS Dd.

## XXIX. SPALYRION (alone).

- 1.—Hemidrachma.

OBSERVE:—Aria's horseman; spear at the charge.

LEGEND imperfect:—ΒΑΣΙΛΕΥΣ ΕΑ . . . . ΠΗΛΑΙΠΙΩΣ.

REVERSE:—Neptune to the front, with trident and bolts.

ARIAN LEGEND:—*Makrigan Makrigan Spalirion.*

Monogram, 48c.

Capt. Hay

- 2.—□ Copper. Plate vi., fig. 6; pl. xviii., fig. 7.

OBSERVE:—Female figure, to the left.

LEGEND:—ΒΑΣΙΛΕΥΣ ΒΑΣΙΛΕΥΣ ΜΕΤΑΛΛΟΥ ΠΗΛΑΙΠΙΩΣ.

REVERSE:—Jove enthroned.

ARIAN LEGEND:—*Makrigan Makrigan Spalirion.*

Monograms, Nos. 131, 131a, and 131b.

'Ariana Antiqua,' pl. viii., fig. 12.

## XXX. AZAS.

- 1.—Didrachma.

OBSERVE:—The standard Aria's type of horseman, to the right; the spear point slightly depressed.

LEGEND:—ΒΑΣΙΛΕΥΣ ΒΑΣΙΛΕΥΣ ΜΕΤΑΛΛΟΥ ΑΖΟΥ.

REVERSE:—Female figure, with palm-branch in the left, and a four-pointed object in the right hand, somewhat after the nature of the Scythian monograms, No. 109, etc.

ARIAN LEGEND:—*Makrigan Makrigan Makrigan Azon.*

Monogram, Captain Robinson, 122, with Arian letters, etc.

'Ariana Antiqua,' pl. vi., fig. 12. 'Jour. des Sav.,' 1835, ii., 16, monogram, 122 with az.

- \*)—Hemidrachmae.

Monograms, No. 122, with Arian letters *aa* and *da*; No. 123, with the word *az*; No. 38a, with severally *aa* and an Arian *z*; No. 38a, with a Greek *A* and an Arian *f*; No. 38a, with an Arian *f* alone; No. 124, with an Arian *ai*; No. 124, with *da* and *az*.

'Ariana Antiqua,' pl. vi., fig. 18.

- 2.—Didrachma.

OBSERVE:—Horseman, as above.

REVERSE:—Minerva Promachos, to the left.

Monograms 85; 85, with Arian *z* on obverse; 85 simple with 132; 133, with the Arian word *az*, and No. 63a.

- 2).—Hemidrachma.  
 Monograms, British Museum, 85; Captain Robinson, 85 simple with 132.
- 3.—Didrachma.  
 Obverse:—Horseman, as above.  
 Reverse:—Jupiter, with spear and bolts.  
 Monograms, Capt. Robinson, 133a with 84. British Museum, 133a with 86.
- 4.—Variety of No. 3. Didrachma.  
 Obverse:—Horseman, as above, with the Arian letters *Py* below the horse.  
 Reverse:—Jove, with the spear or scepter, triple-pointed, the points diverging from one centre; nimbus encircles the head.  
 Monogram, No. 85.
- 5.—Hemidrachma.  
 Obverse:—As above.  
 Monogram, Arian letters *h*.  
 Reverse:—Jove, with triple-pointed scepter; but the right hand is elevated in the act of throwing the thunderbolt.  
 Monograms, No. 83a, with an Arian *a*. Captain Robinson.
- 6).—Hemidrachma. Variant.  
 Obverse:—As above.  
 Reverse:—Jupiter seated, to the front, leaning on a spear; the bolts are held in the right hand low down.  
 Monogram, No. 133. Captain Robinson.
- 8.—Didrachma.  
 Obverse:—The Arian horseman, to the right, without the spear; the right hand of the figure is extended above the horse's head.  
 Monogram, an Arian *a*.  
 Reverse:—Minerva, to the right, helmeted and armed with buckler; right hand extended.  
 Monograms, Captain Robinson, 82, with *a*. Lady Elliot, double monogram, 138 and 139, without the Bactrian adjunct of the latter. Mr. Carne's collection, monogram, No. 141, with the several Arian letters *an*, *el*, *pi*, or *dh*.
- (6).—Variety.  
 Obverse:—Horseman, as above, with whip in the right hand and bow behind the saddle.  
 Reverse:—As in No. 6.  
 Monogram, 85 simple, with 133a.
- 7).—Hemidrachma.  
 Monogram 85. Mr. Bayley.
- 8).—Variety.  
 Reverse:—Minerva, to the left.  
 Monograms, obverse, Arian *as*; reverse, 85. Mr. Breton.

## 7.—Didrachma. Plate xvii., fig. 17 (F).

Obverse:—Horseman, as above, with whip in the right hand, bow at the back of the saddle.

Reverse:—Standing figure, with spear, holding a small statue of Victory.

'*Ariana Antiqua*,' pl. vi., figs. 15, 16 (F), 17.

British Museum, monograms, 38a with 53, and Arian letters *t*, *eu*, *da*, etc.; others, with *t*, coin No. 53. B.L., monogram, obverse, Arian *ti*; reverse, 134a associated with 53a and 63; a second, reverse, No. 42 with 136, and an Arian *da*. Mr. Beveton, obverse, monogram, *ae*; reverse, as in the first cited B.L. coin.

## \*)—Hemidrachma.

Monograms, No. 137, with *ae*; a second; No. 128, with *da* and *a*. Lady Elliot. Mr. Beveton, 38a with Arian *t*; a second, obverse, Arian *a*; reverse, 38a with 129.

## 8.—Didrachma. Plate xvii., fig. 13.

Obverse:—Horseman, as above.

Monogram, Arian *ti*.

Reverse:—Minerva, with spear, to the right; bare head, and right arm extended.

Monogram, 85 simple with 133a. B.L., obverse, monogram, Arian *ti*; reverse, 65a with 123a.

'*Ariana Antiqua*,' pl. vi., fig. 13.

## (H).—Variety. Bitten.

Reverse:—Similar figure, with triple-pointed spear.

Monogram, Arian *ae* and 124a.

## 9.—Didrachma. Bitten. Plate xvii., fig. 16.

Obverse:—As above.

Reverse:—Neptune, with trident, to the front.

Monogram, No. 140, with *ae*.

'*Ariana Antiqua*,' pl. vi., fig. 16.

## 10.—Hemidrachma. Plate xvii., fig. 18.

Obverse:—Horseman, as above, with bow and whip.

Reverse:—Minerva, to the front, armed with spear and shield, the right arm upraised.

Monograms 135a, with *ae*; 135b and Arian monogram 142, *ae* *ae* / 150a with 39a. Another: obverse, monogram *o*; reverse, 140a, with an indistinct symbol like 132. Miscellaneous: obverse, mint-marks Arian letters *x*, *l*, *p*, and *ae*.

'*Ariana Antiqua*,' pl. vi., fig. 19.

## 11.—Drachma.

Obverse:—King, standing, to the left; right hand extended, and sloped spear on his left shoulder.

Reverse:—Winged figure of Victory, to the right, holding out a chaplet.

Monogram, No. 64.

## 10.—□ Copper. Plate xvii., fig. 14.

Obverse:—Neptune, treading on a prostrate figure. Legend as above.

Reverse:—Female figure, surrounded by branches. Legend as above.

Monogram, No. 64.

'*Ariana Antiqua*,' pl. vii., fig. 5.

Mr. Brereton has a superstruck piece of this class, offering the peculiarity in that the obverse legend exhibits portions of the cypher of two distinct dies: it may be represented in its present state thus—ΣΤΥΡΟΧ ΒΑΣΙΛΕΩΣ ΜΕΤΑΛΛΟΥ ΑΣΟΥ.<sup>1</sup>

## 11.—□ Copper.

Obverse:—King, riding on a Bactrian camel.

Reverse:—Thibetan yak (or long-haired bull).

'Ariana Antiqua,' pl. vii., fig. 6.

## 12.—□ Copper. Plate xvi., fig. 2.

Obverse:—King on horseback, with spear sloped.

Reverse:—Indian bull, to the right.

Monograms, No. 85; 85 simple, with *t*, and the four variants classed under No. 143. Another: obverse, *new*, reverse, 134 with *et*.

'Ariana Antiqua,' pl. vii., fig. 12.

## 13.—□ Copper. Plate xv., fig. 8.

Obverse:—Hercules, to the front, with chaplet upraised in his right hand, and club in the left, after the manner of the reverse devices of Demetrius.

Monogram, 33a.

Reverse:—Horse, free, to the right.

Monogram, *mi*.

'Ariana Antiqua,' pl. vii., fig. 7.

## 14.—○ Copper. Plate xvi., figs. 4, 5.

Obverse:—Elephant, to the right.

Reverse:—Indian bull, to the right.

Monograms, Nos. 82 with Arian *a*; 85; 85 simple with 142a; 85 simple with 122.

'Ariana Antiqua,' pl. vii., fig. 10.

## 15.—○ Copper. Plate xvi., figs. 1, 2, 3.

Obverse:—Humped bull, to the right.

Reverse:—Indian lion, to the right.

ARIAN LEGEND:—*Μηδάρχου Βασιλέως Μακεδόνος Απασ*.

Monograms, 132 with 142a, 135a with 30a, 135b with 30a, 143b with 30a, 144 with 138, 145 with 138, 145 with 140, 135b with 142, 85b with 133, 134d with *et*.

'Ariana Antiqua,' pl. vii., fig. 8.

\*—Small coins. Similar types.

'Ariana Antiqua,' pl. vii., fig. 9.

\*)—□ (?) 'Ariana Antiqua,' pl. vii., fig. 3. Monogram, *a*. Rev. monogram, *pr*.

## 16.—○ Copper. Plate xvi., fig. 10.

Obverse:—Demeter, seated on a throne.

Reverse:—Hermes, standing.

Arian legend as in No. 1.

Most common monogram, No. 135b associated with 142.

'Ariana Antiqua,' pl. vii., fig. 12.

<sup>1</sup> [Some months ago (1857) Mr. Bayley read an interesting paper, on the subject of the superstruck coins of Asia, at one of the meetings of the Numismatic Society.]

- 17.—○ Copper. Plate xvi., fig. 12.  
 OBTVERSE:—Figure, seated cross-legged.  
 REVERSE:—HORSE, standing.  
 ARIAN LEGEND, as in No. 15.  
 Monograms, the combinations entered in plate xix. from No. 147 to 153.  
 'Ariana Antiqua,' pl. vii., figs. 13, 14.
- \*)—Small coin, ditto. 'Ariana Antiqua,' pl. vii., fig. 15.
- 18.—○ Copper.  
 OBTVERSE:—Female figure, clothed in Indian garments, standing to the front; the right arm is raised towards the head, and the left hand rests upon the hip.  
 REVERSE:—Humped bull, to the right.  
 Mr. Brexton, monogram 154. Mr. Bayley, monograms indistinct.
- 19.—○ Copper.  
 OBTVERSE:—A lion, sejant.  
 LEGEND, blundered and unintelligible.  
 REVERSE:—Bede figure of Demeter, seated.  
 ARIAN LEGEND:—*Mahārājasa* . . . . . *Ayasa*.  
 Monogram, No. 31a, with *ś*. Mr. Bayley.
- 20.—○ Copper. Minute coin. Types similar to No. 7.  
 Monograms, Obv. No. 155, and rev. No. 38a and 38b. Mr. Bayley.
- 21.—○ Copper. Types similar to □ Copper, No. 12.  
 Monogram 85. Mr. Brexton.
- 22.—○ Copper.  
 OBTVERSE:—King on horseback, with the right hand extended.  
 Monogram 124a.  
 REVERSE:—Indian lion to the right.  
 ARIAN LEGEND, imperfect:—*Mahārājasa Mahātasa* . . . . . *Ayasa*.  
 Monogram indistinct. Col. T. Bueh.
- 23.—○ Copper.  
 OBTVERSE:—Aria's horseman with whip and bow.  
 Monogram, 157.  
 REVERSE:—Minerva, to the right; with sloped spear and right hand extended.  
 ARIAN LEGEND, as in No. 15.  
 Monograms, group 155.
- 24.—○ Copper. Plate xvii., fig. 22.  
 OBTVERSE:—Horseman, with right hand raised.  
 Monogram 124a.  
 REVERSE:—Demeter, standing, to the front; right arm extended, the left supports the cornucopia.  
 ARIAN LEGEND:—*Mahārājasa Mahātasa Ekramikasa Ekapadīrajasa Ayasa*.  
 Monograms, No. 156, 156 with *ś*, 156a, 156b, 156c, with variants of miscellaneous Bactrian letters on the field.



25.—Plate II., figs. 11, 12.

Obverse:—Indian lion, to the right.

Reverse:—Demeter, standing, to the left.

ARIAN LEGEND:—*Māhārājasa Rajatirājasa Mahatasa Ayasa.*

'*Jour. As. Soc. Beng.*,' vol. ix., p. 870.

### SUB-ASAS (ASPAVARMA).

1.—○ Copper.

Obverse:—Asas' horseman, with right hand holding a whip.

Legend:—*BAZIAEZE BAZIAZEN METAST AZOT.*

Monogram, No. 157 (*Agg.*).

Reverse:—Minerva, helmeted, with spear and shield, to the right; the right hand supports a small figure of Victory.

ARIAN LEGEND:—*Indra Varma Patraia Aspavarmana Strategasa Jayatasa*  
(General Aspavarma, son of Indra Varma, the victorious).

Monograms, No. 158, with 152, and the several Arian letters entered in the plate under No. 159.

As this catalogue does not profess to follow any authoritative serial distribution of the monarchs comprehended in the general list, I insert in this place, as most suitable, in obedience to typical order, certain obvious derivatives from the standard devices of Asas' mintages, which bear exclusively the names and titles of Satraps who may be supposed to have succeeded to the possession of local divisions of his once extensive dominions, but who refrained from arrogating to themselves the style and dignity of absolute monarchy.

### ZEIONIASAS.

1.—Didrachma. Plate XVIII., fig. 3.

Obverse:—Asas' horseman, with right hand extended, and bow at the back of the saddle.

Legend illegible. Monogram 159.

Reverse:—King, standing, to the front; supported by two figures in the act of placing a chaplet on his head.

ARIAN LEGEND, imperfect at the bottom:—*Jihoniasas.*

Monogram 161.

'*Jour. des Sav.*,' 1839, p. 162. '*Ariana Antiqua*,' pl. viii., fig. 17.  
Cunningham, '*Jour. As. Soc., Beng.*,' 1854, pl. XXIV., fig. 1.

2.—Hemidrachma. Unique.

Obverse:—Horseman as above.

Legend, corrupt:—*ANILAIT TROT CATPAU ZEIONICOT.*

Monogram 163.

Reverse:—Standing figure of the king receiving a chaplet from Demeter?

ARIAN LEGEND:—*Manipalasa Chatrapasa Patraia, Chatrapasa Jihoniasa.*

Monogram, No. 162.

Mr. Bayley. See also Cunningham, *loc. cit.*, pl. XXV., fig. 2.

<sup>1</sup> [Cunningham, '*Jour. As. Soc. Beng.*,' 1854, p. 996. *Strategas* is identified with the Greek *Στρατηγος*.]

## 3.—○ Copper.

Obverse:—Indian bull, to the right.

Legend, corrupt and imperfect:—THAT YIT CATPAH.

Monogram, No. 159, with *see*.

ARIAN Legend:—... *gula Patras Chattrapas JIHANAYASA.*

Monogram 163.

British Museum, two coins, from Major Cunningham's collection.

## 4.—○ Copper. Unique. Plate xlii., fig. 8.

Obverse:—Elephant.

Legend, corrupt and imperfect:—ANIZIAAI . . . . . ZATONIC.

Monogram, P.

Reverse:—Bull, to the left.

ARIAN Legend:—*Masi*. . . . . (J) *hanasa.*

Monogram as in the plate.

Col. T. Bush.

## 5.—○ Copper.

Obverse:—Arian horseman.

Legend, imperfect. Combination obtained from six specimens gives no more satisfactory result than the following:—FATOT TOT XAPANW[C

A - KILA.

Monogram indeterminate.

Reverse:—Stade, or Indian lion, to the right.

ARIAN Legend, likewise imperfect and incomplete:—*Chattrapas Bhata Drophasa Abasa Patras.*

Monograms, *see*, X, etc.

'*Ariana Antiqua*,' pl. viii., fig. 2; and Cunningham, '*Jour. As. Soc. Beng.*' 1854, p. 695.

## XXXI. ATILIAS.

## 1.—Didrachma. Plate xlii., fig. 27.

Obverse:—Arian horseman, with spear.

Legend:—BAHAAGA BAHAGIN METAAOT AZIAIDOT.

Monogram, *si*.

Reverse:—Figure, to the left, holding the hour-pointed object in the right, and palm-branch in the left hand.

ARIAN Legend:—*Maharajasa Rajarajasa Mahatasa Ayulakasa.*

Monograms, British Museum, 133 with *see* and *si*; ditto, 134 with *si*.

British Museum monogram, *si* with *si* and *g*. Capt. Robinson, monogram 134 with *si* and *a*. B. I. Miscellaneous Arian letters, *see*, *si*, *si*, *si*, with *si*, and A with *see*.  
'*Ariana Antiqua*,' pl. viii., fig. 5.

\*)—Hemidrachma. Similar types. British Museum monogram, 132a, with *si*. Capt. Robinson, monogram *si*, with an Arian *si*.

## 2.—Didrachma.

Obverse as above, with Arian letter *a* in the field.

Reverse:—Female figure, to the left, with chaplet and palm-branch.

Monogram, No. 77.

'*Ariana Antiqua*,' pl. viii., fig. 6.

## 3.—Didrachma. (145 grs.)

Obverse:—Azar's horseman, to the right, with whip and the bow fixed behind the saddle.

Monogram, No. 137.

Reverse:—Dionysos, standing to the front, leaning on their spears.

ARIAN LEGEND:—*Mithrasias Episthrosias Mahotas Ayilshas.*

Mr. Bayley. Col. Nethall, Obv. monogram, 137 with *h*, and Rev. 164.

## 4.—Didrachma. (145 grs.)

Obverse as No. 3.

Monogram, 137a.

Reverse:—Single figure, bearded, clothed in skins, to the front; the right hand grasps a spear, the left rests upon the sword hilt.

Monogram, No. 165.

Mr. Bayley. Mr. C. M'Leod.

## 5.—□ Copper.

Obverse:—Standing figure, to the front (indistinct), with right arm extended, and mantle on the left.

Monogram, 36a.

Reverse:—Lion, as in Azar's coins.

Monogram, No. 168. A second coin has *mi* (*h*)

Mr. Bayley. Capt. Robinson.

## 6.—□ Copper.

Obverse:—Azar's horseman, with spear sloped downwards.

Reverse:—Bull, to the left. Arian legend as in No. 1.

British Museum monogram, 132 with *mi*, and traces of monogram 125a.

## \*)—Plata xvii., fig. 23.

Reverse:—Bull, to the right.

## 7.—□ Copper.

Obverse:—Azar's horseman.

Reverse:—Elephant.

ARIAN LEGEND:—*Mithrasias Mahotas Ayilshas.*

Monogram, variety of No. 124, with *si*.

'Ariane Antiqua,' pl. viii., fig. 7.

## 8.—□ Copper.

Obverse:—Horseman.

Reverse:—Hercules, seated, with club, and as in Spalyrios' coins. (C a.)

ARIAN LEGEND, as in No. 7.

Monogram, No. 124.

Mr. Bayley.

And a second piece, 167. Ordinary monogram, No. 134, with Arian *a*, *si*, or *si*.

## 9.—□ Copper.

Obverse:—Standing figure, to the right, with the right arm extended horizontally, and holding a chaplet.

Reverse:—Figure in short tunic, with horse veil-like garments around the head, etc.

ARIAN LEGEND, imperfect:—... *ias Mahotas Ayilshas.*

Mr. Bayley.

## XXXII. SOTER MEGAS.

## 1.—○ Copper.

Obverse:—Bust of king, with crested helmet, to the left; the right hand holds an arrow.

Monogram, No. 158, with the Arian letters *si*, in front of the profile.

Reverse:—Axe's type of horseman, elevating a small object like a cross.

Legend:—BACIAEY BACIAEYON COITHE MEFAC.

Monogram, No. 158.

Mr. Bayley.

'Ariana Antiqua,' pl. ix., figs. 8, 10.

## 2.—○ Copper. Plate xvii., fig. 25.

Obverse:—Bust of king, with rayed head; the right hand holds either a javelin with pennis, or a simple dart.

Monogram, No. 158.

Reverse:—As above.

Monogram, No. 158.

'Ariana Antiqua,' pl. ix., figs. 11 to 19.

There are numerous subordinate varieties of this type of coin, which it is needless to particularise in this place. But I may notice that the degraded Greek sigmae, which have heretofore usually been rendered by a square C, are, in these mintages, indifferently interchanged with the equally debased C on the different specimens.

## 3.—○ Copper. Plate xvii., fig. 25.

Obverse:—King on horseback, to the right.

Legend:—BACIAEY BACIAEYON COITHE MEFAC.

Reverse:—A male figure, with fat helmet and shield, eating incense upon a small altar.

ARIAN LEGEND:—*Mithrasas Epistropas Mahatas Trakatas.*

Monogram, *si*.

'Ariana Antiqua,' pl. ix., figs. 20, 21, 22.

## 4.—○ Copper.

Obverse:—Head, with shield, to the right.

Monogram, No. 158.

Reverse:—Standing figure, to the left, holding a staff or spear in the left hand, and what may possibly be intended for the thunderbolt in the right.

GREEK LEGEND (imperfect).

Mr. Bayley.

## XXXIII. KADPHISES.

## 1.—Gold. Unique.

Obverse:—King, seated after the Oriental fashion (cross-legged) on clouds.

He holds a club in his hand, and small flames ascend from his shoulders; he wears a Scythic cap surmounted by a single-centred trident.

Legend:—BACIAETC COHMO KADPHICH.

Monogram, 159.

Reverse:—Siva and his bull (Nandi); flames rise from the divinity's head; he holds a trident in his right hand.

ARIAN LEGEND:—*Mithrasas Epistropas sarvelaga Loustas Mahimastas Apistatas.*

Monogram, 159.

Captain Robinson.

## 2.—Gold.

Obverse:—King, seated on an Eastern throne, with a flower in his right hand.

Legend and monogram as above.

Reverse:—Device as No. 1.

Monogram, ditto.

'Jour. des Sav.,' 1834, pl. fig. 7. 'Ariana Antiqua,' pl. x., fig. 3, and pl. xii., fig. 17.

I do not propose to enter into any detail of the coins of Kadphises in this place, as they scarcely belong to the Bactrian series. It will be sufficient to refer to the types already figured and described by Prinsep,<sup>1</sup> and the additional specimens engraved in the 'Ariana Antiqua.'<sup>2</sup> It is to be noted that these and other Indo-Scythian coins are known only in gold and copper, the single supposed silver specimen in the B.M.<sup>3</sup> having proved to be of copper plated over!

XXXIII. GONDOPHARUS.<sup>4</sup>

## 1.—Copper. Plate xliii., fig. 15.

Obverse:—Aśok' horseman, to the right.

Legend:—BACTRANOC BACTRANON ΓΟΝΔΟΦΑΡΟΥ.

Monogram, No. 170.

Reverse:—Figure, with trident.

ARIAN Legend:—Mithraia Rajaraja Mahatasa Gadopharasa.<sup>5</sup>

British Museum coin. Monogram, No. 171.

<sup>1</sup> 'Ariana Antiqua' (billion coin), pl. v., fig. 16.

<sup>1</sup> [Pl. viii., fig. 4; pl. xii., figs. 1, 2, 3.]

<sup>2</sup> ['Ariana Antiqua,' pl. x., figs. 7 to 21.]

<sup>3</sup> ['Ariana Antiqua,' pl. xi., fig. 9.]

<sup>4</sup> [An enquiry of considerable interest has been raised with reference to the name preserved on these coins, as long veiled from European intelligence, in virtue of the almost literal identity it bears to the designation of the king mentioned, in certain old church legends, as the ruling potentate of India at the period of the mission of St. Thomas the Apostle. The coincidence in the appellation is certainly remarkable, though there is a defect in the primary authority for the statement, a difficulty in regard to the correspondence of the size of the kingdom, and a doubt as to the useful accordance of the epochs of the legendary and the numismatically-certified monarchs, the latter of whom seems to belong to a date prior to our era; but, for the reconciliation of this last obstacle, there is a fairly open margin afforded by the successional coins, which in themselves suggest the question as to whether the name of Gondopharus was not posthumously elevated into the rank of a dynastic title. The following heads of sentences will indicate the leading combinations ascribed to by the 'Legenda Aurea,' p. 33:—'Thomas apostolus cum esset apud Casaream, apparuit ei dominus dicens: rex Indiarum Gondofarus, etc., p. 35. Post hoc autem apostolus et Abbanes ad regem Indiarum pervenerunt. . . . God fater regis, etc., p. 37. Post hoc autem in superiorem Indiam abiit.'—'Jacobi a Voragine Legenda Aurea,' Dresden, 1846. Cf. also 'Lombardica Historia' (1490), Keurher, pp. 122 and 91 severally of the French and Latin editions of his 'Chron.' etc.; also Assmann's erudite rectifications, pp. 39 and 591, vol. iii. (2nd part).]

<sup>5</sup> [The Arian orthography of this name varies considerably, not only in the different mintages of diverse types, but even in pieces having similar standard devices: among the latter, belonging to class No. 1, I note *Gondophrata*—*Godophta*, etc.]

## 2.—○ Copper.

OBSERVE:—As above.

LEGEND:—ΒΑΣΙΛΕΥΣ ΒΑΣΙΛΕΥΣ ΜΕΓΑΛΟΥ ΤΥΔΕΩΣ ΕΡΡΟΥ.

REVERSE:—Minerva, armed, to the right.

ARIAN LEGEND:—*Mithras Rajadivya Tradata . . . Gudapharan.*

Monogram, No. 134c with 172.

Mr. Brexton. 'Ariana Antiqua,' pl. v., fig. 17.

## 3.—○ Copper.

OBSERVE:—As above.

REVERSE:—Male figure, with spear, to the right.

Monograms, No. 134c with 172 (*t* and *p*are), No. 171 with 155c.

'Ariana Antiqua,' pl. v., fig. 18.

## 4.—○ Copper. (Type as in pl. xviii., fig. 15; and pl. xxii., fig. 14).

OBSERVE:—King, on horseback; to his front is seen Victory, presenting a chaplet.

LEGEND:—ΒΑΣΙΛΕΥΣ . . . ΕΡΡΟΥ (?). ['Ariana Antiqua' coin, ΕΡΡΟΥ

ΜΕΓΑΛΟΥ ΤΥΔΕΩΣ.]

REVERSE:—Centre device, the monogram figured under No. 170, pl. xii.

ARIAN LEGEND:—*Mithras . . . Daga . . . as Apratikata Ja . . . as**Gudapharan.*

Monograms, Arian letters, No. 63 and see.

Mr. Bayley. 'Ariana Antiqua,' pl. xxi., fig. 10.

5.—○ Copper.<sup>1</sup>OBSERVE:—Head of king, to the left; the contour similar to the *Pakores'* busts.

Legend imperfect. B. B., etc.

REVERSE:—Victory, with chaplet.

ARIAN LEGEND:—*Mithras Rajadivya Mahatma Gudaphara . . .*Monogram, *ga*, and an indistinct Arian letter.

Mr. Bayley.

## 6.—○ Copper. Plate xviii., figs. 5-8.

OBSERVE:—Head of king, to the right, grossly barbarized. [ΤΗΡΟΣ ΤΥΔΕΩΣ ΕΡΡΟΥ.]

REVERSE:—Victory, as in No. 5.

ARIAN LEGEND:—*Mithras Gudapha . as Tradata.*

Mr. Brexton.

## 7.—○ Copper. Small barbaric coin.

OBSERVE:—Rude filleted head, to the right.

Abbreviated Greek legend, ΒΑΣΙ ΒΑΣ . . . Τ.

REVERSE:—Rude figure of Thessalian Minerva, to the right.

ARIAN LEGEND:—*Rajadivya Mahatma Gudaphara.*Monogram, Arian *stri* and *hd* or *ho*.

## XXXIV. ARDALAGERS.

## 1.—○ Copper.

OBSERVE:—King's bust to the right, as in the *Pakores'* type.

LEGEND:— . . . ΙΑΚΩC ΚΑΤΗΡΟΣ Α . . .

REVERSE:—Figure of Victory, to the right (of good execution).

ARIAN LEGEND:—*Tradata Mithras Abdagasan.*

Mr. Brexton.

<sup>1</sup> [There is an interesting coin in the British Museum, brought from India by Captain HOLLING, typically connected with the above, which deserves mention in this place.—○ Copper. *Obv.*—Bust of king to the left, wearing the Parthian tiara. Imperfect legend, in corrupt Greek, ΒΑΣΙΛΕΥΣ. *Rev.*—Figure of Victory, as in No. 6. Greek

## 2.—○ Copper.

Obverse:—Aras' horseman, to the right, with flat cap and flowing fillet; hand upraised.

Legend, corrupt:—BAKIAETONTOI BAKIAEONT ABAATATOT.

Monogram, 170.

A coin in the B. I. gives the name ABAATATOT. Rev. monogram, 398 with 1745, etc.

Reverse:—Erect figure, to the right; head-dress as on the obverse, with spear, hand extended.

ARIAN LEONCE.—*Godophere Rêvéle Potroze Mâhârâjasa Abdagases.*

[Coin] 'of Godophere's brother's son, Mâhârâja Abdagases.'

Capt. Robinson, 398 with Arian monogram, No. 174 (*Sakre or Saphre*).

Some of the coins of this series modify the obverse legend. It is usually in corrupt and bungled Greek, and difficult to make sense of; but it clearly accords with the substance conveyed in the Arian legend above transcribed, in defining the nepotial relationship of Abdagases. A collation of three specimens (B. I.) produces the following imperfect version—BA LAKTA □AAA ITNAIOTEP AAEATIAEOT. The Reverse legend is also uncertain in the different specimens, adding, at times, the titles of *Trodatasa* and *Dieromiasa* after the Mâhârâja. Monogram, 170.

## 3.—○ Copper. Similar types.

Legend, imperfect [IOOTEP AAEAT] with the addition of the title of *Trodatasa* before the name on the reverse. Mr. Brereton.

## 4.—○ Copper.

Obverse:—Horseman, to the left.

Reverse:—Figure as in No. 1, without the cap. Major Cunningham.

\*)—Small coin. Mr. Bayley.

## 5.—○ Copper.

Obverse:—As No. 2. Monogram, No. 145 with 2.

Reverse:—Erect figure, holding a small statue of Victory, to the left. Monogram, No. 134c, with Greek AP and Bactrian 2. Mr. Bayley.

## SUB-ABDAGASES SARAT.

## 1.—○ Copper.

Obverse:—Horseman, as in No. 2. Legend imperfect.

Monogram, No. 170, with p. My 'Cabinet,' 170, and A.

Reverse:—Figure as above, No. 2.

ARIAN LEONCE.—*Mâhârâjasa Mahatasa Trodatasa . . . . Godophroza Sarata.*

Monogram, No. 159, with 7 and small letters, p, sk, etc. in the field. Mr. Bayley, p. 24, etc. 'Ariana Antiqua,' pl. 7, fig. 20.

Legend imperfect, but the name or title reads clearly CANARAPOT. Cf. Jelli Spartiani—Lugduni Bat. *senioris*, p. 33; and Kertker, pp. 80, French edit., 69, Latin edit. *Pennsylvanica*?

[Major Cunningham renders the doubtful word here omitted as *Deva-kadasa* (Sanskrit, देव हृद *Deva-hrîdye*), God-hearted, Overpower. 'Jour. A. Soc. Beng.,' 1854, p. 713.]



## 2.—○ Copper.

OBVERSE :—Aras' horseman.

REVERSE :—Jupiter, holding a figure of Victory, to the left.

ASIAN LEGEND :—*Mithradates Sarmis Dha(maspides) Sarmis* [Cunningham].

Monogram, No. 134c, with Greek ΔΡ and Aras i.

'*Ariana Antiqua*,' pl. v., figs. 19, 20.

## XXXV. ARSACES.

I extract the following notice of the coins of Arsaces from Major Cunningham's paper in the '*Jour. As. Soc. Beng.*,' vol. xi., 1842, p. 125.

## 1.—○ Copper.

OBVERSE :—A horseman, to the right.

LEGEND :—BACIACTONTOC BACIACTON AICAIOT APCAIOT.

REVERSE :—Type obliterated.

ASIAN LEGEND :—*Mithradates Euphrates Mahatmas Adahakhus Tradatus.*

## 2.—○ Copper.

OBVERSE :—A horseman, to the right.

LEGEND, imperfect :—BAI . . OY APCAIOT.

REVERSE :—Male figure, to the left, holding a small figure in his right hand.

ASIAN LEGEND :—*Mithradates . . Adahakhus.*

## XXXVI. FAKORES.

## 1.—○ Copper.

OBVERSE :—Bearded head, to the left; the hair is elaborately curled and arranged after the Persian fashion.

LEGEND :—BACIACTC BACIACTC BAKCTHC.

REVERSE :—Victory with chaplet, to the right.

ASIAN LEGEND :—*Mithradates Euphrates Mahatmas Fakuras.*

Monograms, Nos. 177, 178, composed of Bactrian letters, with the additional foot-stroke peculiar to the style of writing in use on these coins.

'*Jour. As. Soc. Beng.*,' vol. xi., pl. fig. 11.

## XXXVIII. ORTHAGNES.

## 1.—○ Copper.

OBVERSE :—Head of king, to the left; the hair is arranged after the Persian fashion on the Fakores' device.

LEGEND (corrupt) :—BACIACTC BACIACTON METAC OPOAINTHC.

REVERSE :—Victory, to the right, holding out a fillet.

LEGEND (imperfect) :—(*Mithradates* ?) *Mahatmas Gudupharas . . .*

British Museum. Bactrian monograms, *gu* and *go*.

## COINS AND RELICS FROM BACTRIA.

[Article XXI. completes the series of James Prinsep's original essays. The subjoined paper by his brother, Mr. H. T. Prinsep, is reproduced from the 'Journal of the Asiatic Society of Bengal,' December, 1838, as introductory to, and partially illustrative of, my author's latest artistic contribution to Indian numismatics,—an engraving which he himself was not spared to comment on in the text of the Journal for whose pages it was designed.†]

† [The severance of this connection, at the time deemed only temporary, is recorded in the subjoined proceedings of the 'Asiatic Society of Bengal,' which, however intentionally complimentary, does but scant justice to the position James Prinsep achieved for the Society itself, in association with the journal of which he is here recognised as the editor.] —

Extract from the proceedings of the 'Asiatic Society of Bengal,' Wednesday evening, the 14th November, 1838. The Hon. Sir Edward Ryan, President, is in the chair.—Before proceeding to the general business of the meeting, the President rose and stated that he held in his hand a letter from the Secretary, Mr. James Prinsep, the substance of which must be a source of deep regret to every member of the Society, for every one must feel the loss the Society had suffered in the departure of its Secretary, Mr. James Prinsep. He assured the meeting, however, and he spoke on the authority of a conversation he had with Mr. Prinsep, before his departure, that this gentleman's absence from India would be but for a short period, and that on his return he would be ready to take the same interest, and to display the same zeal and anxiety, which had so honorably distinguished his discharge of the important duties he had undertaken in connexion with the Society. The President said that the objects of the Society had, under Mr. Prinsep's able superintendence, been prosecuted with a vigour which had added largely to its credit and reputation; and that the results produced in every department of science and literature, for which the Society was indebted chiefly to its Secretary's activity and varied powers, had sustained its character in a manner rivaling the periods when it derived renown from the labours of a Jones, a Colebrooke, and a Wilson. The President took occasion to add that, in the time of Mr. James Prinsep, and on his proposition, the name of the Society had been associated with a monthly periodical, established by the late Captain Herbert, originally under the name of 'Gleanings in Science.' The work was afterwards extended and ably conducted by Mr. Prinsep himself; and at his suggestion it was resolved, in 1831, that as long as this periodical should be conducted by a Secretary of the Society, it should bear the title of 'Journal of the Asiatic Society,' under that name it had been since continued by Mr. Prinsep with very distinguished success to the present day. The Society had no property in the 'Journal,' and no right to prevent Mr. Prinsep from separating it again from the Society, and conducting it on his own account; but he had no such intention. He (Sir E. Ryan) had ascertained that Mr. James Prinsep had made arrangements for its being continued to the end of the present year from materials in hand; and after that he meant that his series should be closed; but he had no objection to the Society's continuing the periodical by the same name, under other management, as a concern quite inde-

It has been already announced in the pages of this Journal, that the extensive collections of coins and other relics made by Mr. Maason, by Sir Alexander Burnes, and Dr. Lord, were on their way to Calcutta, and were likely to fall shortly under the examination of the Editor. He felt it as a great compliment that was paid to his efforts to restore the lost portions of Indian and Bactrian history by means of the coins and inscriptions still extant in the language and with the superscriptions and dates of the rajas of those times, that collectors in all parts of India were in the habit of submitting to his inspection whatever they lighted upon as unusual, and sought his reading and interpretation of the legends, emblems, and inscriptions, which baffled the learning and ingenuity of the pandits and antiquarians of the vicinity. As a consequence of the happy discoveries made by him in this line, coins and transcripts of inscriptions came in from all quarters, from Assam and Ava to Bokhara and Sindh, and from Ceylon northward to Nepal. The possession of the rich store of materials thus accumulated gave facilities

pendent. Now, he (the President) believed that all the members of the Society would regret exceedingly that a periodical as established, and which had acquired such credit and consideration, should be discontinued. He trusted that it would be resumed by Mr. J. Prinsep himself when he returned to India; but, in the meantime, he should submit to the meeting the propriety of taking into consideration the possibility of making some arrangement to carry it on during Mr. Prinsep's absence. Having premised thus much, the President stated that he should read to the meeting Mr. James Prinsep's letter, placing the situation of Secretary at their disposal; but, as he had no doubt it would be the unanimous feeling of the meeting to desire to retain Mr. Prinsep in official connection with the Society, he should not consider this letter as an absolute resignation, but should propose a resolution, and submit arrangements founded upon it, which would enable Mr. Prinsep to resume the office on his return to India. The President then read the following letter:—

*To the Hon. Sir Edmund Ryan, Bt., President of the Asiatic Society.*

Hon. Sir,

Being compelled by ill-health to proceed to sea and eventually to Europe, I have taken my passage on board the "Hercules," with the intention of being absent from the country for two or perhaps three years. I am thus under the necessity of placing at the disposal of the Society the situation of its Secretary, which I have filled for five years.

It is with great reluctance and regret that I thus separate myself from a body with whom I have been associated in labours of much interest and utility, whose favour has encouraged my zeal, and through whose credit and reputation in the world I have obtained the means of making generally known my own humble efforts in the cause of science, and my own unsuccessful endeavours to explore the antiquities of the country in whose service we are directed.

But the disability of sickness is an accident to which we are all liable, and from which there is no resource, but in temporary departure to a better climate. I am thus compelled to leave my incomplete labours to be perfected by others, and to relinquish the place I have held in the Society, that provision may be made for its competent discharge under the failure of my own power of longer rendering useful service.

I have the honour to be, etc.

(Signed)

JAMES PRINSEP.

1st November, 1838.

Proposed by the President, seconded by Mr. Currie, and unanimously resolved: That the resignation of Mr. James Prinsep be not accepted; but the Society hope that he will return to resume the situation of Secretary, which he had filled so much to the credit of the Society for a period of five years.—Resolved: That the President communicate to Mr. James Prinsep the desire of the Society, that he shall not consider himself as having vacated the situation of Secretary; and express the hope that, on his return to India, he will resume the situation of Secretary.

of comparison and collation which were doubtless a main cause of his success; but the study and exertions required for the satisfaction of these numerous references to his individual skill, although entered upon with a zeal participated only by those who have achieved much, and feel that there is yet more within their reach which ought to be the result of their own discoveries, were too severe for the climate of India, and the Editor's robust constitution sunk at last under the incessant labour and close attention given to these favorite studies at the very moment when the richest collection of inscriptions, coins, and relics, that had ever been got together in India, were actually on their way to Calcutta, as materials for maturing the results he had achieved. The collections of Mr. Masson were forwarded from Bombay in the *John Adam*, which reached Calcutta only in the course of the past December. There are of these coins from four to six thousand, besides the contents of several *topes*, and casts of figures of *Budh*, with various other remains of the period antecedent to the Muhammadan invasion of Bactria and Afghanistan. The whole of this collection was by order of Government laid upon the table of the Asiatic Society at the meeting of January, 1839; but the members present felt that, in the absence of their late Secretary, and likewise of Capt. Cunningham, Mr. V. Tregear, and Colonel Stacy, there were no persons in Calcutta to whom the examination, arrangement, and report upon the coins and relics could be committed with confidence. They came therefore to the unanimous resolution to recommend their being forwarded without delay to England, where the Honorable Court would have the opportunity of submitting them to the inspection of the late Secretary of the Asiatic Society, jointly with Dr. Wilson, the librarian at the East India House, and so the ends of science and of antiquarian research would be most effectually answered.

The care of this magnificent collection, which is large enough to supply all the museums in Europe, has been kindly undertaken by Mr. Cracroft, a very zealous member of the Asiatic Society, and there is ground for hoping that under his superintendence a catalogue may yet be made before he takes his final departure for England. The articles have come round in bags without any separate lists, and in one bag there are about two thousand copper coins.

But, independently of Mr. Masson's collection, another numbered by thousands has been brought to Calcutta by Dr. McLeod, the Inspector General of Hospitals to Her Majesty's forces in India. This consists partly of coins of all metals, but there are also several seals and gems of different stones cut with a great variety of emblems and devices. All these are the property of Sir A. Burnes, and have arrived

for deposit and custody as well as for inspection; they are therefore still available for the curious, and will continue so until Sir A. Burnes shall send instructions as to their disposal. We cannot ourselves undertake the particular examination of these relics so as to give the detailed description they deserve. A selection from the coins had, however, previously been made at Simla, and those deemed most curious being forwarded by the dawk arrived fortunately before the departure of our Editor. Amongst them is that most curious coin of Dr. Lord, with the head of Eucratides on one side, and of both his parents on the other, a drawing of which is exhibited in plate xlii. From the other selected coins thus transmitted, a plate was prepared by the Editor, which was intended to be illustrative of an article he designed giving in our last October number. The plate remains, and we attach it to this article, that the curious who have followed our Editor to the length of his past researches may see the objects which he deemed worthy of fresh illustration in the field of Indo-Bactrian numismatology. If the 'Herefordshire,' the ship in which he took passage, had touched at Madras, or had put into Mauritius, or had met a vessel at sea, we might have hoped for the comments promised on this, as on two other plates which we also intend to give, and shall separately refer to. But the time approaches when the issue of the last number of our series will be expected, and we can no longer defer the publication, under the doubtful expectation of receiving the desiderated paper from the Cape of Good Hope. Of the coins and gems therefore in Sir Alexander Burnes's collection we can at present make no use, but we hold them in deposit for the examination of others, and to await his further instructions. We must be content at present to give the plate referred to, which it will be seen is numbered xliii., together with such brief reading of the names, as a Tyro of Indian numismatics might be expected with the aid of the alphabets to supply. The plate is of Indo-Bactrian coins of date antecedent to the introduction of Grecian art, with the Grecian alphabet, into the mints of that country. The legends are in the ancient No. 1 character of the then universal Pâli language, with Bactrian characters in some instances on the obverse, or intermixed. The names and emblems on these coins are well worth the study of the learned.

Along with Sir A. Burnes's coins, Dr. McLeod brought to Calcutta a very singular relic obtained by Dr. Lord at Badakhshân, and which is, we believe, destined for the British Museum. The relic in question is an ancient patens of silver, embossed in the interior in very high relief, and representing, with all the usual adjuncts of classic mythology, the procession of Bacchus. The god himself sits in a car drawn by two

harnessed females with a drinking cup in his hand. A fat infant, Silenus, stands in front, and there is a female figure sitting on the after corner of the car, which, from its disproportionate size, we imagine to be the carved elbow of the seat on which the god reclines. There are also two winged cupids in attendance, one flying with a wand in his hand, to which a fillet is attached, the other end of which is held by the infant Silenus; and the other on the foreground behind the wheel of the car, as if employed in pushing it on. The car is followed by a dancing Hercules, distinguishable by the club and lion skin. The heads of this figure and of the Bacchus are both wanting, owing probably to their having been of gold, or thought so, while the rest of the patera, being only of silver gilt, has escaped similar violation. The gilding, however, is mostly worn away from long use, and in one part the side of the cup is actually worn through. Independently of the circumstance of the main figure being represented with a cup in hand, its identity with the Grecian Bacchus is proved by the vines circumpendent, and by the figure of a tiger standing prominently out in the fore-ground and drinking out of a wine jar.

This patera is the property of Dr. Lord, who is also the fortunate owner of the double-headed coin of Eucratides, the original apparently from which the plate of a similar coin is given in Dr. Vincent's 'Periplus,' but the double head is there represented as being on both sides of the coin. With a liberality deserving of particular notice, both these unique relics have been gratuitously appropriated by the finder, or are intended to be so, in the manner deemed by him most conducive to the ends of science, Dr. Lord not desiring to retain them as isolated trophies of his own good fortune in the field of research and discovery.

I fear we must not look upon this piece of plate as affording evidence of the state of the arts in Badakhshan, where it was found, at any particular epoch. That it is of high antiquity is quite apparent from the condition of the metal, as well as from the design; but in the Periplus of the Erythraean sea, published amongst Arrian's works, it is distinctly stated that ἀργυρόματα, i.e. articles of silver plate, were a staple import from the west, for exchange against the productions of India. At Minnagarh, upon the Indus, it is further stated by the author of that treatise that he himself presented to the rāja *Baportipa* ἀργυρόματα, valuable pieces of plate, in order to secure his favor, and the grant of certain privileges of trade. There is thus reason to believe that the patera must have been brought from Greece or Asia Minor, and either presented in like manner, or sold to some sovereign of Bactria, by a merchant desiring similar privileges of trade in that country. That it has been in use for centuries is evident from the

worn condition it now presents; but for how many it was in use, and for how many it lay treasured in royal or other repositories, is more than may now be conjectured.

# INDO-BACTRIAN COINS.

Specification of coins in plate xlv.

1. OBEVERSE: Armed figure standing with a club or spear; no inscription.  
REVERSE: Elephant with rider. Bactrian inscription, *Rajasa*; rest not decipherable.
2. OBEVERSE: Woman and deer, with inscription not legible: emblem, etc.  
REVERSE: Tree and mountain; with emblems. [See note, vol. I., p. 201.]
3. OBEVERSE: Man and bull; same emblem as No. 2; and *Maharajasa Mahabhatasa* in old Pahl clearly legible, but the name to the left baffles us.  
REVERSE: Same device and emblem as No. 2, and *Maharajasa* clearly legible in Bactrian at the bottom.
4. OBEVERSE: Same device as No. 2, and same emblem; *Rajasa Rajasa Mahabhatasa* in old Pahl.  
REVERSE: Same device and emblem as No. 2; *Maharajasa* in Bactrian; the rest not legible.
5. A larger coin; the same device on both sides as No. 2; obverse defaced.  
REVERSE: *Maharajasa* in Bactrian characters.
6. OBEVERSE: Bull and emblem; no letters.  
REVERSE: Same emblem as Nos. 2, 3, and 4, with addition of a wheel: very peculiar.
7. OBEVERSE: Deer and man, with emblem; *Rajasa Kumbhata* in old Pahl.  
REVERSE: Same as Nos. 2, 3, 4, etc.
8. OBEVERSE: Deer and woman; *Maharajasa* in Pahl.  
REVERSE: Same as No. 2; no inscription.
9. OBEVERSE: Deer and man; *Kumbhata* in Pahl.  
REVERSE: Same as No. 2.
10. Same precisely. Pahl inscription, *Nandana*, the last letter being an initial  $\eta$  d.

# BUDDHIST SATRAP COINS.

11. OBEVERSE: Horse rearing up.  
REVERSE: *Rajasa*, in Bactrian, with various marks.
12. OBEVERSE: Horse.  
REVERSE: Standing figure with bow. Inscription in Pahl, *Sarika tépasa patamapasa*. [*Khatrapasa P(H)apimashana*.]
13. The same indistinct.
14. OBEVERSE: The same worn.  
REVERSE: Inscription in Sans. *Tamapasa* legible in Pahl. [*Khatrapasa patimashana P(H)apimashana*.]
15. Nothing distinct.
16. OBEVERSE: Horse's tail and hind quarter.  
REVERSE: Figure standing. *Legimopasa* in Pahl.
- 17, 18, 19. OBEVERSE: Bull.  
REVERSE: Standing figure, with inscription *Rajapadana*. Centre one in Bactrian.



20. **Obverse:** Standing figure. Pali inscription, *Pephusapasa*. [*Khatapasa Raja* . . .]  
**Reverse:** Figure. No inscription.
21. Nothing made out.
22. **Obverse:** Figure in speaking attitude. *Rajasa Rayhama*
- 23, 24, 25. Not deciphered.

N.B.—These latter are classified as of the Satrap group—first, because of the title *Raja* or *Maharaja* not being found in any of them; secondly, because of the names having so evidently an ancient Persian aspect; and lastly, because of the horse emblem, which probably had its origin in the circumstances which attended the accession of Gushtasp, Darius Hystaspes.



**USEFUL TABLES,**  
RELATIVE TO  
**THE COINS, WEIGHTS, AND MEASURES**  
OF  
**BRITISH INDIA;**

TOGETHER WITH  
**CHRONOLOGICAL TABLES AND GENEALOGICAL LISTS,**  
HAVING REFERENCE TO  
**INDIA AND OTHER KINGDOMS OF ASIA.**

BY THE LATE  
**JAMES PRINSEP, F.R.S.,**

SECRETARY TO THE ASIATIC SOCIETY OF BOMBAY.

EDITED,  
**WITH NOTES, AND ADDITIONAL MATTER,**

BY  
**EDWARD THOMAS,**

LATE OF THE BOMBAY CIVIL SERVICE; MEMBER OF THE ASIATIC SOCIETIES OF CALCUTTA,  
BOMBAY, AND YARIN.

**LONDON:**  
**JOHN MURRAY, ALBEMARLE STREET.**  
1858.

## PREFACE.

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IN putting forth this New Edition of Prinsep's Useful Tables, I may confidently appeal to the sterling value of the work, and the appreciation with which it has previously been received by the public in India, as evinced in reprints, partial and entire, issued at Calcutta and elsewhere.

My task as Editor has been limited to bringing up the Monetary Tables to the latest possible date, the occasional insertion of Notes, and the incorporation of such additional Dynastic Lists as chance to be accessible in this country. The orthography of the Oriental names has usually been reproduced literally after the original printed text, wherein they are found to vary to the extent that might have been anticipated consequent on the assemblage of the component materials from the works of various European commentators, who each followed his own method of transliteration, *et* *tri* who, for the most part, wrote before we had arrived at even the present indeterminate stage in the system of the transcription of Eastern tongues which Sir William Jones so meritoriously inaugurated.

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## USEFUL TABLES,

ETC.

### BRITISH INDIAN MONETARY SYSTEM AS ESTABLISHED BY REGULATION VII. OF 1833 [OF THE BENGAL GOVERNMENT.]

Silver is the legally constituted medium of exchange in all money transactions throughout the British Indian possessions. Gold coin is a legal tender, at a fixed value of sixteen rupees<sup>1</sup> for the gold mohr<sup>2</sup> of Calcutta, and fifteen rupees for the gold mohr of Madras and Bombay; but it is not demandable in payment, and is left to find its current value in the market. Copper coin is only a legal tender at the established rate of sixty-four paisá<sup>3</sup> to the rupee, on payments falling short of one rupee.

The rupee is, then, the unit or standard measure of value throughout India, and by the Regulation lately passed, a perfect assimilation in weight and fineness has been effected in this unit of currency of the three Presidencies, so that the rupee of Upper India, of Madras, and of Bombay are now identical in value. From this uniformity are excepted the three provinces of Bengal Proper, Bahár, and Orissa; in which the Murahidábádí or sikká<sup>4</sup> rupee still continues to be the legal currency; but the relation of one coin to the other is now reduced to great simplicity, one Farrukhábád, Madras, or Bombay rupee being precisely equal to fifteen áná<sup>5</sup> sikká.

<sup>1</sup> رُپیہ rūpiya.    <sup>2</sup>  rūpya, 'silver.'    <sup>3</sup> مہر mohr, 'a seal.'

<sup>4</sup> پیسہ paisá.    <sup>5</sup> سکہ sikka, 'a coining die.'    <sup>6</sup> روپیہ rūpiya.

<sup>7</sup>  ána.    <sup>8</sup>  ána.

The following table exhibits the scheme of the British Indian monetary system :

GOLD RUPEE.	RUPEE.	ANNA.	PAISA.	PART.
CALCUTTA..... 1	16	250	1024	3072
MADRAS AND BOMBAY.... 1	15	240	960	2880
	1	16	64	192
		1	4	12
			1	3

Small shells, called *kauris*,<sup>1</sup> are also made use of for fractional payments, and are reckoned as follows: but their value is subject to considerable fluctuation, and they are now nearly superseded by the copper currency.

4 Kauris make ..... 1 Ganda.<sup>2</sup>

20 Gandas ..... 1 Pan.<sup>3</sup>

5 Pans..... 1 Anna.

#### DESCRIPTION OF THE CURRENT COINS. GOLD AND SILVER.

The inscriptions upon the Company's gold and silver coins are in Persian, as follows:

Obverse of the *sikka* rupee struck at the Calcutta mint.

حامی دین محمد سایه فضل اله سکه زد بر هفت کشور شاه عالم بادشاه

"Defender of the Muhammadan faith, Reflection of Divine excellences, the Emperor Shāh 'Ālam has struck this coin to be current throughout the seven climes."

REVERSE: ضرب مرشدآباد سنه ۱۱ جلوس میمنت مانوس.

"Struck at Murshidābād in the year 19 of his fortunate reign."

The rupee of the Western provinces, coined at the late mints of Farrukhabād and Benāres, and now at the mint of Sāgur, bears the same inscription on the obverse. On the reverse the date and place of coinage are different:—

ضرب فرخ آباد سنه ۳۵ جلوس میمنت مانوس

"Struck at Farrukhabād in the year 45 of his prosperous reign."

The several varieties of coin, produced by modifications of weight, standard, or die, from time to time in the Calcutta and subordinate mints of the Bengal Presidency, from their all bearing the same legend and date, are not easily recognized but by an experienced money-changer. As, however, different regulations regarding deficiency of

<sup>1</sup> کوری *kauri*. <sup>2</sup> پاد *padā*, "a quarter." <sup>3</sup> پان *pan*.

<sup>4</sup> گند *ganda*. <sup>5</sup> گند *ganda*. <sup>6</sup> گند *ganda*.

weight, etc., apply to the coins of the old and new standard, it is convenient to point out a mode of discriminating them.

1. The old standard *sikká* rupee of 1793-1816 has an oblique milling.

2. The new standard *sikká* rupee of 1816-1832 has a straight milling.

3. The new *sikká* rupee, struck under the present regulation, has a plain edge, without milling, and a dotted rim on the face.

The distinctions of the oblique and straight milling apply also to the old and new gold *mahr*. Of the up-country or Farrukhabád coins:—

4. The old standard Farrukhabád rupee (or '45th Sun Lucknow rupee' of Reg. XLV. 1803) has an oblique milling.

5. The Benares rupee, coined 1806-1819, has also an oblique milling.

6. The new standard Farrukhabád rupee, coined at the Farrukhabád mint, 1819-24, and at the Benares mint, 1819-30, and now at the Sagar mint, has an upright milling.

7. The Farrukhabád rupee, coined under the new regulation at the Calcutta mint, has a plain edge, and a plain rim on the face.

The coins struck before 1793, at the old mints of Patna, Murshidabad, and Deera, the Benares rupee anterior to 1806, and the coins of all the Native independent states, are known by their having no milling. The Company's coin up the country is thus generally called *kaldár* 'milled, or made by machinery', in contradistinction to the unmilled or native coins, which are fashioned and stamped with the hammer and anvil.

The Madras rupee has a dotted rim on the face, and an indented cord-milling: that coined in Calcutta has an upright milled edge: it has the symbol of a rose on the obverse. The inscriptions are as follows:—

سکه مبارک بادشاه غازي عزيزالدين محمد عالم گير

"The auspicious coin of the noble Monarch, Asia-ud-din Muhammad 'Álamgir'" (the father of Sháh 'Álam.)

ضرب اترکات سنه ۴۰ جلوس میمنت مانوس

"Struck at Atrakt in the 20th year of his propitious reign."

The Bombay coin has now a plain edge and the following legend:

سکه مبارک شاه عالم یادشاه غازي ۱۲۱۵

"The auspicious coin of the great Emperor, Sháh 'Álam, 1215."

ضرب سورت سنه ۴۶ جلوس میمنت مانوس

"Struck at Sûrat in the 46th year of his propitious reign."

کلدار *kaldár*.



## COPPER COINS.

The inscription on the Calcutta paisá is, on the obverse :

سنه جلوس ۳۷ شاه عالم بادشاه

"In the 37th year of the reign of the Emperor, Sháh 'Álam."

On the REVERSE : एक पाई सिका एक पाई सिका

"One pá'i sikká."

In Bengálí, Persian, and Nágarí characters. Serrated rim on the face and plain-edge milling.

The new double-paisá or half-áná piece has on one side merely the words 'half-áná,' in English and Bengálí; on the reverse, the name in Persian and Nágarí. The pá'i or third of a paisá has in the same manner merely the name 'one pá'i,' which makes it liable to be confounded with the 'one pá'i sikká,' and on this account, perhaps, it has not found ready currency. The natives reckon only sixty-four paisá to the rupee, while English accounts divide the áná into twelve pá'i; to distinguish them, this latter (hitherto an imaginary coin), was called the pá'i of account.

At Madras and Bombay an English device has been introduced for the copper coinage; on one side, the East India Company's arms; on the other, in the Bombay coin, a pair of scales, surmounted with the name of the coin in English; below, the word عدل '*adal*, 'justice,' in Arabic, and the Hijra date also in Arabic numerals. The Madras paisá coined in England in 1803, has, on the reverse, its value according to the old system 'XX. cash;'<sup>1</sup> and in Persian, بیست کاس چهار فالت *bat las chahár fals ást*, 'twenty *las* make four *fals*.' It weighs 180 grains (one *tola*<sup>2</sup>), and the half and quarter in proportion.

The principal object in this place being to shew the present state of the currency and the existing mint regulations, it is unnecessary to detail the various alterations which have been made from time to time in the monetary systems of the three Presidencies, of which a sketch will hereafter be given as an introduction to the General Table of Indian Coins.

The adoption of a general pictorial impression for all the coins of the British possessions in India, in lieu of the present anomalous system, has frequently engaged the attention of the Government here and at home; and it is hoped, now that the new mints of Calcutta and Bombay are perfectly capable of executing such a design, and the prior measure of equalizing the standards of the three Presidencies has been carried into effect, that the unhappy fissure of mis-statements as to

<sup>1</sup> = बीस or बीस *bat las* or *kash*.      <sup>2</sup> = تولا *told*. (तील)

names, places, and dates, exposed in the above list, will give place to a device at once worthy of the British name, and affording better security against fraudulent imitation.

## WEIGHT AND ASSAY OF THE COINS.

## GOLD COINS.

The privilege of coining gold in the Bengal Presidency is limited to the mint of Calcutta, where gold mohrs of two standards are now coined: the *ashrafi*<sup>1</sup> or *Murshidabad* gold mohr, which maintains a high degree of purity (99½ touch) has a weight of 190.895 grains troy. The new standard gold mohr of 1819 contains one-twelfth of alloy. The absolute quantity of pure metal was then reduced in a trifling degree to adjust the ratio of its value to that of silver as fifteen to one.<sup>2</sup> The new gold mohr therefore weighs sixteen-fifteenths of a rupee, and passes by authority for sixteen rupees, but the ratio of gold to silver has been of late years higher in the Calcutta market, especially for the purer coins, so that the new mohr generally passes for sixteen

<sup>1</sup> اشرفی *ashrafi*.

<sup>2</sup> In the English coin the ratio is 14.287 to 1—in the French money as 15.5 to 1.

[In continuation of this subject, I extract from the 'Numismatic Chronicle' some remarks of my own, in regard to the relative value of gold and silver in India, at the commencement of the Mogul rule: 'The authoritative reform of the coinage, effected by Shih Shah (A.D. 946—953=A.D. 1539 to 1545), appears by internal evidence to have been accompanied by a revision and re-adjustment of the relative value of the lower metals, silver and copper. There are no positive data to show at what rate silver exchanged against gold in the time of Shih Shah; but an examination of Abul-fazl's description of the coin rates of the great Akbar, who succeeded to the throne in 1556, A.D., discloses the very unexpected proportion of gold to silver as 1 to 9.4.] I obtain this result from a comparison of the intrinsic contents assigned to four several descriptions of gold coins in the 'Ayin-i Akbari,' as contrasted with the corresponding total weight of the silver money defined by the same authority as their exchangeable value. I understand both gold and silver to have been pure. Actual assay shows Akbar's gold coins to have been totally unalloyed, and Abul-fazl himself directly asserts that the silver used in his master's coinage was pure.

I append an outline of my data on this head:—

1st.—Chagul, weight in gold T. 3, M. 0, R. 5½=30 Rs. of 11½ māshas each : 649.84 :: 172.5 × 30 (5175.0) : 1 :: 9.4118

2nd.—Āshāfi, gold, weight T. 1, M. 2, R. 4½=12 Rs. : 218.90 :: 172.5 × 12 (2070.0) : 1 :: 9.4563.

3rd.—Pāshī, gold, weight M. 12, R. 1½=10 Rs. : 153.28 :: 172.5 × 10 (1725.0) : 1 :: 9.4118.

4th.—'Adi Gutkash, gold, weight 11 māshas=9 Rs. : 165 :: 172.5 × 9 (1552.5) : 1 :: 9.40909.

(The common talk of 180 gr., māsha of 15 gr., and ratio of 1.875 gr. have been used in these calculations).

Annexed are the relative proportions of these several denominations of coins, as given by Abul-fazl—extracted verbatim from an excellent MS. of his 'Ayin-i Akbari.' And to complete the original details of the entire subject for those who may desire to

to seventeen, and the old gold muhr for seventeen to eighteen, sikká rupees. When originally coined, both of these moneys were at a discount.

The proportion of fifteen to one is also adopted in the gold rupees of Madras and Bombay, which are coined of the same weight as the silver money of those Presidencies, and pass current for fifteen silver rupees.

The weights and purity of the gold coins are as follows:—

DESCRIPTION.	Pure gold.	Alloy.	Weight in gold.	Weight in tolas.	Legal value.
Old Calcutta muhr, <sup>1</sup> with an oblique milled edge	189.4037	1.4913	120.804	1.064	16 sikká rupees.
New standard gold muhr, with a straight milling	187.651	17.089	204.710	1.127	
Madras and Bombay new gold rupee	166	16	180	1.600	15 rupees.

examine them, I also subjoin the Rupee equivalents, further determining the actual value of the silver coins.

جگل بسم جیم وکاف فارے وسکون لام چهار گوشه سه تولچه  
 و پنج سرخ و ربع قیمت سے روپیہ  
 آفتابے گرد - بوزن یکتولچه دو ماشه و پنج سرخ ربع کم \* بها \*  
 دوازده روپیہ  
 الہی [لعل جلالی and] گرد \* دوازده ماشه دو سرخ ربع کم  
 آفتابے منقوش اربع ده روپیہ  
 عدل گشکہ بفتح عین وسکون دال ولام وسم کاف فارے وسکون  
 نای فوقانی ہندی وفتح کاف وھا۔ مکتوب یازده ماشکی قیمت نہ روپیہ  
 روپیہ سیمین نقدیست گرد یازده و نیم ماشکی در زمان شیر  
 خان پدید آمد \* \* از چهل دام اگرچہ نرخ افزون وکم شود  
 لیکن در مواجب این قیمت اعتبار رود  
 جلالہ چهار گوشہ \* \* در وزن و نقش چون نخستین  
 روپیہ سه گونه روای داشت اول چهار گوشہ پاکت سیم بوزن  
 یازده و نیم ماشہ جلالہ نام از چهل دام [E.T. + + + + +]

<sup>1</sup> This coin is inserted, contrary to rule, because its fabrication is still permitted at the Calcutta mint, for the convenience of the merchants; as it bears a higher value, proportionally, in the market than the new muhr.

Half and quarter gold mohrs are coined of proportionate weight to the above.

The pagoda of Madras and the old gold mohr of Bombay will find their place in the General Table of Coins.

## SILVER COINS.

The weight, fineness, and relative value of the silver coins established by the new regulation are as follows:—

DENOMINATION.	Pure silver. Fine grains.	Alloy. Fine grains.	Weight in fine grains.	Weight in tola.
Calcutta sikká rupee.....	170	10	192	1.0066
Farrukhabád, Sonet, <sup>1</sup> Sagar, Madras, or Bombay rupee .....	164	14	180	1.000

Eight-*áná* pieces (*dáá-anáí*<sup>2</sup>) and four-*áná* pieces (*sááí*<sup>3</sup> or *chaw-anáí*<sup>4</sup>) are struck of proportionate weight to each of the above coins.

The standard quality of the metal is eleven-twelfths of pure silver to one-twelfth of alloy.

The conversion of sikká into Farrukhabád rupees and *vice versa* may be effected in the simplest manner by the following rules, which obviate the necessity of providing tables for the purpose.

**RULE FIRST.**—To convert Farrukhabád rupees into sikká rupees:—Deduct one-sixteenth of the amount of the Farrukhabád rupees from that amount, and the result will be their equivalent in sikká.

**RULE SECOND.**—To convert sikká rupees into Farrukhabád, Madras, or Bombay rupees:—Add one-fifteenth of the amount of the sikká to that amount, and the result will be the equivalent in Farrukhabád, Madras, or Bombay rupees.

To avoid confusion here, the weights and values of the former currencies of the Company, which differ in a small degree from the foregoing scale, as well as those of the existing currencies of the Native States, will be inserted in the General Table before alluded to.

All silver money of the new standard (with a straight milling or a plain edge), is considered by law as of full weight until it has lost by wear or otherwise two *pá'i* in the rupee; or, in round terms, one per cent.

<sup>1</sup> سنوآت *senawát*, pl. of *sonet*, 'year.'

<sup>2</sup> آٹھ آنی *aṭh-anáí*. <sup>3</sup> سوکھی *sááí*, or سوکا *sááí*. <sup>4</sup> چو آنی *chaw-anáí*.

Coins of the old standard (with the oblique milling) remain subject to the provision of Regulation LXI., 1795, which allows them to remain a legal tender until they have lost only six *ánas* per cent.

The limits of weight are, therefore, as follows :—

	Original weight.	Allowance for wear.	Minimum weight.	Min. weight of 100 rupees.
Old sikká or Murshidábád rupee	179.966 grs.	6 <i>ánas</i> per ct.	179 grs.	99.44 <i>tolás</i>
New sikká rupee	193 grs.	2 <i>phá</i> p. rup.	190 grs.	105.58 <i>tolás</i>
Farrukhabád, old rupee	173 grs.	6 <i>ánas</i> p. ct.	172.352	95.76 <i>tolás</i>
„ new rupee	180 grs.	2 <i>phá</i> p. rup.	178.125	99. <i>tolás</i>

Light-weight rupees are received by Government officers as bullion, the deficiency from standard weight being made good by the payer.

#### COPPER COINS.

The copper coins of Bengal and Bombay are now equalized in weight, and are as follows :—

	Grain weight.	Value.
The half- <i>áná</i> piece	200	2 <i>phá</i> of account
The <i>paisá</i> (marked one <i>phá</i> sikká)	100	1 ditto
The <i>phá</i> of account	25½	1 ditto

By Regulation XXV. of 1817, Sect. 5, copper *paisá*, struck at the Benares mint, weighing 98½ grains, which were intended at first (*vide* Reg. VII. 1814), for circulation in the province of Benares only, and were distinguished with a trident or *trishul*,<sup>1</sup> the symbol of Siva, were made current throughout the Bengal provinces at par with the Calcutta and Farrukhabád *paisá*.

#### COINAGE DUTY OR SEIGNORAGE.

All the Company's mints are open to the reception of gold<sup>2</sup> and silver bullion for coinage on private account. The following is the course of proceeding adopted in the Calcutta mint :—after examination by the processes of cutting and burning, to ascertain that there is no fraudulent admixture, the proprietor takes a receipt from the Mint-Master for the weight of his bullion.—A specimen is then taken for assay, and after that operation the mint receipt is exchanged, at the Assay Office, for a certificate of the standard value of the bullion in gold or silver money. This certificate is convertible into cash at the Treasury as soon as the new coin may be transmitted thither from the mint.

<sup>1</sup> त्रिशूल (trishul)

<sup>2</sup> Except the Nagpur Mint, which coins silver only.

A deduction is made from the assay produce of bullion to cover the expenses of coinage, which vary at the different mints as follows :

	On Gold Bullion.	On Silver Bullion.
At the Calcutta mint.....	2 per cent.	2 per cent.
At the Sagar mint.....	2 ditto.	2 ditto.

[If required in halves and quarters, an additional duty of one per cent. is levied at these Mints.]

At the Madras mint <sup>1</sup> .....	2 per cent.	4 per cent.	} now 2 per cent.
At the Bombay mint <sup>1</sup> .....	2½ ditto.	2 ditto.	

On the re-coinage of rupees struck at the Company's mints of the Bengal Presidency, a charge of one per cent. only is levied.

The rates of seigniorage at Bombay and Madras include the charge for refining; for which a separate charge is made in the Calcutta and Sagar mints, on under-standard bullion only, at the rate of 0.4 per cent. per pennyweight of worseness in the assay: (unless such inferior bullion is required for the purposes of alligation at the mint, when the charge may be remitted on the authority of the Mint Master).

The following is a table of refined charges :—

Assay.	Refining charge per cent.	Assay.	Refining charge per cent.	Assay.	Refining charge per cent.	Assay.	Refining charge per cent.
<i>parts</i>		<i>parts</i>		<i>parts</i>		<i>parts</i>	
0½ Wo.	0.02	6½ Wo.	0.26	12½ Wo.	0.50	18½ Wo.	0.74
1 Wo.	0.04	7 Wo.	0.28	13 Wo.	0.52	19 Wo.	0.76
1½ Wo.	0.06	7½ Wo.	0.30	13½ Wo.	0.54	19½ Wo.	0.78
2 Wo.	0.08	8 Wo.	0.32	14 Wo.	0.56	20 Wo.	0.80
2½ Wo.	0.10	8½ Wo.	0.34	14½ Wo.	0.58	20½ Wo.	0.82
3 Wo.	0.12	9 Wo.	0.36	15 Wo.	0.60	21 Wo.	0.84
3½ Wo.	0.14	9½ Wo.	0.38	15½ Wo.	0.62	21½ Wo.	0.86
4 Wo.	0.16	10 Wo.	0.40	16 Wo.	0.64	22 Wo.	0.88
4½ Wo.	0.18	10½ Wo.	0.42	16½ Wo.	0.66	22½ Wo.	0.90
5 Wo.	0.20	11 Wo.	0.44	17 Wo.	0.68	23 Wo.	0.92
5½ Wo.	0.22	11½ Wo.	0.46	17½ Wo.	0.70	23½ Wo.	0.94
6 Wo.	0.24	12 Wo.	0.48	18 Wo.	0.72	24 Wo.	0.96

And so on for silver of inferior quality. By the practice of the Calcutta mint, the charge for refining is usually remitted up to 6 Wo.; at the Sagar mint, it is levied on all denominations of bullion inferior to standard.

The next two tables, for calculating the intrinsic or assay produce of bullion, are applicable to all the Company's mints, where the toll weight has been adopted.

<sup>1</sup> These two are inserted on the authority of Kelly's 'Cambist'; it seems very advisable that the charges should be equalised at the three Presidency mints, as otherwise the desired uniformity of value cannot be maintained.

TABLE of the *Intrinsic or Assay Produce of Silver Bullion in Farrukhabad and Calcutta rupees, from the 1st of May, 1833.*

Weight of bullion in tola or new weight.	Assay Report.	Youth, or fine silver, in 100 parts.	Produce in Farrukhabad, Madras, or Bombay Ru.	Produce in Calcutta or other rupees.	Weight of bullion in tola or new weight.	Assay Report.	Youth, or fine silver, in 100 parts.	Produce in Farrukhabad, Madras, or Bombay rupees.	Produce in Calcutta or other rupees.
100	doles.				100	doles.			
20	Br.	100.000	102.091	102.273	4	W.	89.583	97.727	91.089
194	Br.	99.792	102.864	102.000	54	W.	89.375	97.500	91.406
18	Br.	99.583	102.636	101.846	6	W.	89.167	97.275	91.193
194	Br.	99.375	102.409	101.633	64	W.	88.958	97.046	90.981
18	Br.	99.167	102.182	101.421	7	W.	88.750	96.818	90.767
174	Br.	98.958	101.955	101.208	74	W.	88.542	96.591	90.554
17	Br.	98.750	101.727	100.994	8	W.	88.333	96.364	90.341
164	Br.	98.542	101.500	100.781	84	W.	88.125	96.136	90.127
16	Br.	98.333	101.273	100.568	9	W.	87.917	95.909	89.913
154	Br.	98.125	101.045	100.355	94	W.	87.709	95.682	89.702
15	Br.	97.917	100.818	100.142	10	W.	87.500	95.455	89.489
144	Br.	97.709	100.591	99.929	104	W.	87.292	95.227	89.275
14	Br.	97.500	100.364	99.716	11	W.	87.084	95.000	89.062
134	Br.	97.292	100.136	99.502	114	W.	86.875	94.773	88.850
13	Br.	97.083	99.909	99.290	12	W.	86.667	94.546	88.638
124	Br.	96.875	99.682	99.077	124	W.	86.458	94.318	88.423
12	Br.	96.667	99.455	98.864	13	W.	86.250	94.091	88.210
114	Br.	96.458	99.227	98.650	134	W.	86.042	93.864	87.998
11	Br.	96.250	99.000	98.437	14	W.	85.833	93.636	87.784
104	Br.	96.042	98.773	98.225	144	W.	85.625	93.409	87.571
10	Br.	95.833	98.545	98.011	15	W.	85.417	93.182	87.358
94	Br.	95.625	98.318	97.798	154	W.	85.209	92.955	87.145
9	Br.	95.417	98.091	97.585	16	W.	85.000	92.727	86.932
84	Br.	95.209	97.864	97.372	164	W.	84.792	92.500	86.719
8	Br.	95.000	97.636	97.159	17	W.	84.583	92.273	86.506
74	Br.	94.792	97.409	96.946	174	W.	84.375	92.046	86.293
7	Br.	94.583	97.182	96.733	18	W.	84.167	91.818	86.079
64	Br.	94.375	96.955	96.520	184	W.	83.958	91.591	85.867
6	Br.	94.167	96.727	96.306	19	W.	83.750	91.364	85.654
54	Br.	93.958	96.500	96.094	194	W.	83.542	91.136	85.440
5	Br.	93.750	96.273	95.881	20	W.	83.333	90.909	85.227
44	Br.	93.542	96.045	95.667	204	W.	83.125	90.682	85.015
4	Br.	93.333	95.818	95.454	21	W.	82.917	90.455	84.801
34	Br.	93.125	95.591	95.241	214	W.	82.709	90.227	84.588
3	Br.	92.917	95.364	95.029	22	W.	82.500	90.000	84.375
24	Br.	92.709	95.136	94.816	224	W.	82.292	89.773	84.162
2	Br.	92.500	94.909	94.602	23	W.	82.084	89.546	83.950
14	Br.	92.292	94.682	94.389	234	W.	81.875	89.318	83.738
1	Br.	92.083	94.455	94.176	24	W.	81.667	89.091	83.523
14	Br.	91.875	94.227	93.963	244	W.	81.458	88.864	83.310
Standard		91.667	100.000	93.750	25	W.	81.250	88.636	83.097
1	W.	91.458	99.773	93.537	254	W.	81.042	88.409	82.884
1	W.	91.250	99.545	93.323	26	W.	80.833	88.182	82.671
14	W.	91.042	99.318	93.111	264	W.	80.625	87.955	82.458
2	W.	90.833	99.091	92.898	27	W.	80.417	87.727	82.244
14	W.	90.625	98.864	92.685	274	W.	80.209	87.500	82.032
3	W.	90.417	98.636	92.471	28	W.	80.000	87.273	81.819
34	W.	90.209	98.409	92.258	284	W.	79.792	87.046	81.606
4	W.	90.000	98.182	92.045	29	W.	79.583	86.818	81.393
44	W.	89.792	97.955	91.833	294	W.	79.375	86.591	81.179
					30	W.	79.167	86.364	80.972

And so on of bullion of inferior quality.



TABLE of the Intrinsic or Assay Produce of Gold Bullion in Calcutta gold mohrs and Bombay gold rupees.

Weighted bullion in tola.	Assay in carats and grains.	Tough or pure gold in 98 parts.	Intrinsic produce in tola or in Mohrs and Bombay gold mohrs.	Produce to new Calcutta gold mohrs of 24.710 grains.	Produce in old gold mohrs of 24.710 grains.	Weighted bullion in tola.	Assay in carats and grains.	Tough or pure gold in 98 parts.	Intrinsic produce in tola or in Mohrs and Bombay gold mohrs.	Produce to new Calcutta gold mohrs of 24.710 grains.
100	2 0 Br.	100.000	100.091	95.923	95.083	100	2 0 W.	97.506	96.454	83.831
"	1 3 1/2 Br.	99.740	100.801	95.674	94.787	"	1 0 1/2 W.	97.339	96.170	83.683
"	1 3 Br.	99.479	100.523	95.423	94.540	"	1 0 1/4 W.	96.979	94.896	83.438
"	1 3 1/4 Br.	99.219	100.239	95.173	94.293	"	1 0 1/8 W.	96.719	94.613	83.183
"	1 3 Br.	98.958	100.054	94.924	94.045	"	1 1 W.	96.458	94.318	82.933
"	1 2 1/2 Br.	98.698	100.070	94.674	93.795	"	1 1 1/4 W.	96.198	94.034	82.683
"	1 3 1/2 Br.	98.437	100.086	94.424	93.545	"	1 1 1/2 W.	95.937	93.750	82.434
"	1 3 Br.	98.177	100.102	94.174	93.295	"	1 1 3/4 W.	95.677	93.466	82.184
"	1 2 Br.	97.917	100.818	93.924	93.045	"	1 2 W.	95.416	93.182	81.934
"	1 1 1/2 Br.	97.656	100.534	93.675	92.795	"	1 2 1/4 W.	95.156	92.896	81.684
"	1 1 1/4 Br.	97.396	100.250	93.425	92.545	"	1 2 1/2 W.	94.896	92.614	81.434
"	1 1 1/2 Br.	97.135	100.066	93.175	92.295	"	1 2 3/4 W.	94.635	92.355	81.185
"	1 1 Br.	96.875	100.082	92.925	92.045	"	1 3 W.	94.375	92.045	80.935
"	1 0 1/2 Br.	96.615	100.098	92.675	91.795	"	1 3 1/4 W.	94.114	91.761	80.685
"	1 0 1/4 Br.	96.354	100.114	92.425	91.545	"	1 3 1/2 W.	93.854	91.477	80.435
"	1 0 1/2 Br.	96.094	100.030	92.175	91.295	"	1 3 3/4 W.	93.594	91.198	80.185
"	1 0 Br.	95.833	100.543	91.925	91.045	"	2 0 W.	93.333	90.940	79.935
"	0 3 1/2 Br.	95.573	100.261	91.675	90.795	"	2 0 1/4 W.	93.073	90.625	79.685
"	0 3 1/4 Br.	95.313	100.079	91.425	90.545	"	2 0 1/2 W.	92.812	90.341	79.435
"	0 3 1/2 Br.	95.052	100.095	91.175	90.295	"	2 0 3/4 W.	92.552	90.057	79.185
"	0 3 Br.	94.792	100.000	90.925	90.045	"	2 1 W.	92.291	89.773	78.935
"	0 2 1/2 Br.	94.531	100.125	90.675	89.795	"	2 1 1/4 W.	92.031	89.480	78.685
"	0 2 1/4 Br.	94.271	100.041	90.425	89.545	"	2 1 1/2 W.	91.770	89.204	78.435
"	0 2 1/2 Br.	94.010	100.057	90.175	89.295	"	2 1 3/4 W.	91.510	88.950	78.185
"	0 2 Br.	93.750	100.278	89.925	89.045	"	2 2 W.	91.250	88.690	77.935
"	0 1 1/2 Br.	93.490	101.000	89.675	88.795	"	2 2 1/4 W.	90.990	88.333	77.685
"	0 1 1/4 Br.	93.230	101.704	89.425	88.545	"	2 2 1/2 W.	90.730	88.083	77.435
"	0 1 1/2 Br.	92.969	101.430	89.175	88.295	"	2 2 3/4 W.	90.469	87.784	77.185
"	0 1 Br.	92.709	101.138	88.925	88.045	"	2 3 W.	90.198	87.500	76.935
"	0 0 1/2 Br.	92.448	100.852	88.675	87.795	"	2 3 1/4 W.	89.938	87.210	76.685
"	0 0 1/4 Br.	92.187	100.568	88.425	87.545	"	2 3 1/2 W.	89.677	86.932	76.435
"	0 0 1/2 Br.	91.927	100.284	88.175	87.295	"	2 3 3/4 W.	89.417	86.682	76.185
"	Standard.	91.667	100.000	87.925	87.045	"	3 0 W.	89.156	86.434	75.935
"	0 0 1/4 W.	91.406	99.716	87.675	86.795	"	3 0 1/4 W.	88.896	86.179	75.685
"	0 0 1/2 W.	91.146	99.433	87.425	86.545	"	3 0 1/2 W.	88.635	85.905	75.435
"	0 0 3/4 W.	90.885	99.148	87.175	86.295	"	3 0 3/4 W.	88.375	85.611	75.185
"	0 1 W.	90.625	98.864	86.925	86.045	"	3 1 W.	88.114	85.357	74.935
"	0 1 1/4 W.	90.365	98.579	86.675	85.795	"	3 1 1/4 W.	87.854	85.043	74.685
"	0 1 1/2 W.	90.104	98.295	86.425	85.545	"	3 1 1/2 W.	87.594	84.789	74.435
"	0 1 3/4 W.	89.844	98.011	86.175	85.295	"	3 1 3/4 W.	87.334	84.535	74.185
"	0 2 W.	89.583	97.727	85.925	85.045	"	3 2 W.	87.073	84.281	73.935
"	0 2 1/4 W.	89.323	97.443	85.675	84.795	"	3 2 1/4 W.	86.813	83.997	73.685
"	0 2 1/2 W.	89.063	97.159	85.425	84.545	"	3 2 1/2 W.	86.552	83.743	73.435
"	0 2 3/4 W.	88.802	96.875	85.175	84.295	"	3 2 3/4 W.	86.292	83.489	73.185
"	0 3 W.	88.541	96.591	84.925	84.045	"	3 3 W.	86.031	83.235	72.935
"	0 3 1/4 W.	88.281	96.307	84.675	83.795	"	3 3 1/4 W.	85.771	82.979	72.685
"	0 3 1/2 W.	88.021	96.023	84.425	83.545	"	3 3 1/2 W.	85.511	82.725	72.435
"	0 3 3/4 W.	87.760	95.739	84.175	83.295	"	3 3 3/4 W.	85.250	82.471	72.185
"	4 0 W.	87.500	95.454	83.925	83.045	"	4 0 W.	85.000	82.218	71.935

And so on of bullion of inferior quality.

The refining charges on under-standard gold as applied at Calcutta are as follows:—

	carats	grs.			carats	grs.	
From .....	0	0½	Wt.	to	1	1	Wt. ½ per cent.
From .....	1	1	Wt.	to	2	2	Wt. 1 per cent.
From .....	2	2½	Wt.	to	3	3	Wt. 1½ per cent.
From .....	3	3½	Wt.	to	4	4	Wt. 2 per cent.
From .....	5	0½	Wt.	to	7	2	Wt. 2½ per cent., etc.

For old standard mohrs, merchants are obliged to bring their gold already refined to the requisite degree of purity.

The produce of any weight, in tolas, of assayed bullion is found by multiplying it by the number opposite to the assay in the proper column (of sikkā or Farrukhāhid rupees, or new or gold mohrs, as the case may be), and dividing by 100. To find the pure contents, the number in the third column 'or touch,' must be taken as the multiplier. For example:—

I. 5432 tolas of refined cake silver reported, on assay, to be 15½ dwts. Br. yield in sikkā rupees,  $5432 \times 100.255 \div 100 = 5441.254$ , or ca. rupees 5441 4 1.

II. 1200 tolas of dollars of 8 Wt. contain of pure silver  $1200 \times 99.583 \div 100 = 1075$  tolas pure.

III. 100 twenty franc-pieces, weighing 55.319 tolas, at 0 1½ n. grs. Wt. yield  $55.319 \times 86.430 \div 100 = 47.812$  new gold mohrs.

These tables, and, indeed, all that are inserted in the present paper, express the fractions of the rupee, or of the tola, in decimals. For converting this expression into the ordinary division of ānās and pā'īs, and *vice versa*, the following table will be found very convenient, and of constant application in monetary calculations.

TABLE for reducing *Ānās* and *Pā'īs* into decimal parts of a Rupee.

1 ānā = 0.0625.

Ānās.	0	1	2	3	4	5	6	7	8	9	10	11 pāi
0	.0000	.0052	.0104	.0156	.0208	.0260	.0312	.0365	.0417	.0469	.0521	.0573
1	.0625	.0677	.0729	.0781	.0833	.0885	.0937	.0990	.1042	.1094	.1146	.1198
2	.1250	.1302	.1354	.1406	.1458	.1510	.1562	.1615	.1667	.1719	.1771	.1823
3	.1875	.1927	.1979	.2031	.2083	.2135	.2187	.2240	.2292	.2344	.2396	.2448
4	.2500	.2552	.2604	.2656	.2708	.2760	.2812	.2864	.2917	.2969	.3021	.3073
5	.3125	.3177	.3229	.3281	.3333	.3385	.3437	.3489	.3542	.3594	.3646	.3698
6	.3750	.3802	.3854	.3906	.3958	.4010	.4062	.4115	.4167	.4219	.4271	.4323
7	.4375	.4427	.4479	.4531	.4583	.4635	.4687	.4740	.4792	.4844	.4896	.4948
8	.5000	.5052	.5104	.5156	.5208	.5260	.5312	.5365	.5417	.5469	.5521	.5573
9	.5625	.5677	.5729	.5781	.5833	.5885	.5937	.5990	.6042	.6094	.6146	.6198
10	.6250	.6302	.6354	.6406	.6458	.6510	.6562	.6615	.6667	.6719	.6771	.6823
11	.6875	.6927	.6979	.7031	.7083	.7135	.7187	.7240	.7292	.7344	.7396	.7448
12	.7500	.7552	.7604	.7656	.7708	.7760	.7812	.7864	.7917	.7969	.8021	.8073
13	.8125	.8177	.8229	.8281	.8333	.8385	.8437	.8489	.8542	.8594	.8646	.8698
14	.8750	.8802	.8854	.8906	.8958	.9010	.9062	.9115	.9167	.9219	.9271	.9323
15	.9375	.9427	.9479	.9531	.9583	.9635	.9687	.9740	.9792	.9844	.9896	.9948

## EXCHANGES.

For the conversion of the rupee into the equivalent currency of other nations, it is necessary to take into consideration the fluctuating relative value of the precious metals *inter se*, from the circumstance of gold being in some, and silver in others, the legal medium of circulation.

It is also necessary to take account of the mint charge for coining at each place, which adds a fictitious value to the local coin. The 'par of exchange' is, for these reasons, a somewhat ambiguous term, requiring to be distinguished under two more definite denominations:—1st, the 'intrinsic par,' which represents that case in which the pure metal contained in the parallel denominations of coins is equal. 2nd, the 'commercial par,' or that case in which the current value of the coin at each place (after deducting the seigniorage leviable for coinage) is equal: or in other words, 'two sums of money of different countries are commercially at par, while they can purchase an equal quantity of the same kind of pure metal.'<sup>1</sup>

Thus, if silver be taken from India to England, it must be sold to a bullion merchant at the market price, the proprietor receiving payment in gold (or notes convertible into it). The London mint is closed against the importer of silver: which metal has not, therefore, a minimum value in the English market fixed by the mint price: although it has so in Calcutta, where it may always be converted into coin at a charge of two per cent. On the other hand, if a remittance in gold be made from this country to England, its out-turn there is known and fixed: each new Calcutta gold muhr being convertible into 1.66 or  $1\frac{2}{3}$  sovereigns nearly; but the price of the gold muhr fluctuates as considerably in India as that of silver does in England, the natural tendency of commerce being to bring to an equilibrium the operations of exchange in the two metals.

The exchange between England and India has, therefore, a two-fold expression; for silver, the price of the sikká rupee in shillings and pence:—for gold, the price of the sovereign in rupees. To calculate the out-turn of a bullion remittance in either metal, recourse may be had to the following

## TABLES OF ENGLISH AND INDIAN EXCHANGES.

The data for the calculation of these tables are:—

1st. One *mas*<sup>2</sup> (or 100 lbs. troy) of silver (one-twelfth alloy) is coined into 3,200 Farrukhabád rupees, or into 3,000 sikká rupees, of which sixty-four and sixty respectively are taken as mint duty, being at the rate of two per cent.

<sup>1</sup> Kelly's 'Cambist,' III., 12.

<sup>2</sup> A مسن mass of silver. ١٠٠٠٠

2nd. 100lbs. troy of English standard silver (18-240ths alloy) are coined into 6,600 shillings, of which 400 are taken as seigniorage or mint duty, being 4s. per lb., or nearly six per cent.; but the mint is not open to the holders of silver bullion, which is only purchased through the bank when required for coinage.

3rd. The sovereign (1-12th alloy) weighs 123.25 grains troy, and no duty is charged on its coinage. 100 lbs. of pure gold yields 5098.3 sovereigns, = 3069.5 new gold muhrs, = 3041.4 old gold muhrs, = 3490.9 Madras and Bombay muhrs.

TABLE showing the produce of 100 *sikká* rupees and of 1 *sikká* rupee in shillings sterling at London, for different quotations of the price of silver in the London price current.

At the London price of silver per troy ounce.		100 <i>sikká</i> rupees will produce	Exchange per <i>sikká</i> rupee.		Remarks.
£	s.		£	s.	
at	0	218.018	2	2.2	Intrinsic par of coin.
5	8	214.714	2	1.8	(2s. 1.04d.) Calcutta
5	4	211.411	2	1.4	mint price of silver.
5	3	208.108	2	1.0	(2s. 1.07d.) commercial
5	2	204.805	2	0.6	par of exchange.
5	1	201.501	2	0.2	(2s. 0.58d.) London
5	0	198.198	1	11.8	mint price of silver.
4	11	194.895	1	11.4	(3s. 2d.)
4	10	191.591	1	11.0	
4	9	188.288	1	10.6	
4	8	184.984	1	10.2	
4	7	181.681	1	9.8	
4	6	178.378	1	9.4	

TABLE showing the produce of 100 *Farrukhabád*, *Ságar*, *Sonát*, *Madras*, or *Bombay* rupees (or 100 *tálas*) of Bengal standard silver (one-twelfth alloy), in shillings and the consequent rate of exchange.

London price of silver per troy ounce.		100 <i>Farrukhabád</i> , <i>Madras</i> , or <i>Bombay</i> rupees will produce	Exchange per <i>Farrukhabád</i> rupee.		Remarks.
£	s.		£	s.	
5	6	204.390	2	0.5	Intrinsic par of coin.
5	5	201.292	2	0.15	(2s. 0.04d.) Calcutta
5	4	198.196	1	11.8	mint price of silver.
5	3	195.099	1	11.5	(1s. 11.51d.) commercial
5	2	192.002	1	11.1	par of exchange.
5	1	188.905	1	10.7	(1s. 11.04d.) London
5	0	185.809	1	10.3	mint price of silver.
4	11	182.712	1	10.0	(3s. 2d.)
4	10	179.615	1	9.6	
4	9	176.518	1	9.2	
4	8	173.421	1	8.8	
4	7	170.324	1	8.44	
4	6	167.228	1	8.06	

The exchange which a bullion remittance from England to India will yield at the London prices of the first column may be found by adding two per cent. to the columns of produce: thus, at 5s. an ounce,  $185.8 + 3.7 = 189.5$  shillings invested in silver bullion, will produce 100 Farrukhabád rupees, and give an exchange of 1s. 10 $\frac{3}{4}$ d. per Farrukhabád rupee. The same remark applies to the above table for sikká rupee exchanges.

TABLE showing the produce of a remittance to London in gold bullion or coin, and the corresponding exchange in Calcutta, Farrukhabád, Madras, and Bombay rupees.

Calcutta price of Gold Mahr.		Calcutta price of English Sovereign.		Calcutta price of standard Gold Bullion per 100 tola.		Intrinsic produce of 100 Mahr rupees thus invested in England.		Intrinsic produce of 100 Farrukhabád, Madras, or Bombay rupees ditto.		Exchange per sikká rupee.		Exchange per Farrukhabád, Madras, and Bombay rupee.	
Rs.	Sa.	Sa.	Rs.	Sa.	Rs.	Shillings.	Pence.	Shillings.	Pence.	s.	d.	s.	d.
15	0	9.638	1406.868		307.616	184.640		2	0.91	1	11.36		
16	2	9.709	1417.600		308.908	193.131		2	0.73	1	11.17		
16	4	9.783	1428.550		304.422	191.640		2	0.52	1	10.99		
16	6	9.858	1439.941		292.861	190.163		2	0.33	1	10.82		
16	8	9.934	1450.932		301.325	188.743		2	0.15	1	10.64		
16	10	10.009	1461.833		199.811	187.323		1	11.07	1	10.48		
16	12	10.084	1472.814		198.329	185.924		1	11.79	1	10.31		
16	14	10.160	1483.805		196.850	184.547		1	11.62	1	10.16		
17	0	10.235	1494.797		195.465	183.190		1	11.44	1	9.98		
17	2	10.310	1505.788		193.977	181.858		1	11.27	1	9.82		
17	4	10.385	1516.779		192.471	180.535		1	11.10	1	9.66		
17	6	10.460	1527.770		191.165	179.236		1	10.94	1	9.50		
17	8	10.536	1538.761		189.820	177.956		1	10.77	1	9.35		

[The old Calcutta gold mahr is omitted in this table, because it bears an artificial value, 14 or 15 tola higher than the new standard mahr.]

The above tables give intrinsic results; that is, they exclude all calculation of charges, insurance, freight, commission, etc., which are of a variable nature. It may be generally assumed, however, that four per cent., or one penny in the rupee, will cover all expenses of remittance to England, from which may be deducted a saving of six months' interest, when comparing the transaction with mercantile bills of twelve months' date.

The par of exchange with other countries may be estimated from the intrinsic and mint produce of their coins, thus:—assuming the Spanish dollar to weigh 416 grains troy, and to be five dwts. worse in assay, we have for

#### SPAIN AND AMERICA.

100 DOLLARS { = 331.111 tola in weight,  
 { = 235.858 Pd. rupees, } or deducting duty { 221.341 Pd. rupees.  
 { = 211.743 sikká rupees, } of 2 per cent. { 207.508 sikká rls.

The Spanish dollar forms also the currency of the Straits of Malacca

and of Manilla; and it is extensively known in the colonies of England, Ceylon, the Cape, Australia, etc.

For the British colonial possessions, however, an Order of Council was promulgated on the 25th March, 1825, extending to them the circulation of British silver and copper money, and directing all public accounts to be kept therein. Where the dollar was, either by law, fact, or practice, still a legal tender, it was to be accounted equivalent to 4s. 4d., and *vice versa*. For the Cape of Good Hope, where the circulation consisted of paper rix-dollars;—and Ceylon, where it consisted of silver and paper rix-dollars, as well as a variety of other coins;—it was provided that a tender and payment of 1s. 6d. in British silver money should be equivalent to the rix-dollar. The sikká rupee was to be allowed circulation at 2s. 1d. and that of Bombay at 1s. 11d., and the five-franc piece at 4s. These regulations are still in force in Ceylon, Australia, Van Diemen's Land, the Cape, Mauritius, and St. Helena.

## FRANCE.

The French kilogramme of standard silver (1-10th alloy) is coined into 200 francs, and the kilogramme weighs 85.744 tolas; therefore

100 FRANCE	{	— 42,879 tolas in weight,	{	or deducting duty of 2 per cent.	{	41,250 Pd. rupees.
		— 42,692 Pd. rupees,				39,673 sikká rupees.
		— 39,452 sikká rupees,				

The coinage duty on silver at Paris is  $1\frac{1}{2}$  per cent., or  $\frac{1}{2}$  per cent. less than in India; hence it will be found that,

100 sikká rupees realize almost precisely 250 francs at the Paris mint.

Minted gold in France is worth  $15\frac{1}{2}$  its weight of minted silver, or the kilogramme is coined into 155 napoleons or twenty-franc pieces: the seigniorage on gold is only  $\frac{1}{2}$  per cent.

One kilogramme of pure gold yields 81.457 gold mikes, or (deducting 2 per cent. mint duty) 79,828 ditto, therefore

100 NAPOLEONS	{	— 82,310 tolas in weight,	{	or deducting mint duty of 2 per cent.	{	46,368 old gold mrs.
		— 47,315 old gold mikes,				46,802 new ditto.
		— 47,757 new ditto,				53,227 Madras and
		— 54,313 Madras and Bom- bay gold rupees,				Bombay gold rupees.

## CHINA.

As the Chinese have no gold or silver coins, but make payments in these metals by weight, it is sufficient to state the value of the taol of the sycee and dollar silver usually current with them.

100 taol of	— 322,135 tolas in weight — (120 oz. 16 dwts. English);					
Sycee silver av.	{	— 344,105 Pd. rupees,	{	or deducting duty of 2 per cent.	{	337,226 Pd. rupees.
15 dwts. Br.		— 322,602 sikká rupees,				316,150 sikká rupees.
100 taol of	{	— 314,811 Pd. rupees,	{	or deducting duty of 2 per cent.	{	308,515 Pd. rupees.
dollar 5 Wo.		— 295,135 sikká rupees,				289,233 sikká rupees.

The par of exchange with other places may in a similar manner be found from the table of coins.

## GENERAL TABLE OF INDIAN COINS.

When it was said, at the commencement of this paper, that the rupee was the universal unit of currency throughout India, a reservation should have been made for those parts of the Peninsula where the Pagoda and Fanam still circulate. There are, in fact, two distinct systems still prevalent, the Hindú and the Musalmán; and although the former has become extinct throughout the greater part of Hindústán by the predominance of the Muhammadan power, it is traceable in the old coins found at Kanauj, and other seats of ancient Hindú sovereignty, which agree nearly in weight with the coins still extant in the several petty Hindú States of Southern India.

## HINDU SYSTEM.

The unit of this system was of gold, and the old specimens found are of sixty or one hundred and twenty grains in weight: showing an evident connection with the Grecian drachma and didrachma of gold (or χρυσος and δισχρυσος) and confirming the testimony afforded by the device and symbols of old Hindú coins, of a direct descent from their Bactrian prototype.

As the Muhammadan power never gained an entire ascendancy in the Peninsula, the same system of currency continued to be issued from the mints of a number of petty Rájahs in Malabar and the Carnatic. The principal of these were at Bangalore and Mysôr, under the Ikkeri Rájá, who coined the Sadasiya hūns,<sup>1</sup> so called from a former Rájá. They bore the figures of Siva and Parvati on one side, and a temple on the reverse. During the usurpation of Hyder 'Alí and Tipú, Bahádurí and Sultání hūns were struck in Mysôr; the former are distinguished by a  $\text{ح}$  the initial of Hyder's name. At Travancore also a mint has existed for a very long period, coining Ánandráí hūns, so called from a prince of that name. The Ikkeri and Travancore mints are the only two now in existence.

The name of this coin among Europeans is 'Pagoda,' a Portuguese appellation derived from the pyramidal temple depicted on one side of it. The proper Hindú name is Varáha,<sup>2</sup> 'wild boar,' and doubtless originated in a device of the Boar Incarnation, or Avatár, of Vishnu upon the ancient coinage of the Carnatic; for the same figure appears as the signet of the Rájás of that country, on some old copper grants of land in the Mackenzie collection.<sup>3</sup> The Hindú name probably

<sup>1</sup> हुन                      <sup>2</sup> वराह

<sup>3</sup> The Varáha also appears on some ancient silver coins of Orissa. See Wilson's account of coins of this type, 'Asiatic Researches,' vol. xvii. p. 586.



varied according to the image on the coin; thus we find the Rāmatanka having the device of Rāma and his attendants; and the Matsya<sup>1</sup> hūn of Vijayanagar with four 'fish' on the obverse. Other pagodas have Vishnu, Jagannāth, Venkateswar, etc. on them; those with three Swāmis, or figures, are of the best gold, and are valued ten per cent. higher than the common pagoda.

'Hūn' is the common term used by the Muhammadan writers, and indeed generally by the natives, for the pagoda. It signifies 'gold' in the old Carnatic language.

The hūn was subdivided into 'fanams' and 'kās.' Fanam, or more properly panam,<sup>2</sup> is identical with the word pan, known in this part of India as one of the divisions of the Hindū metrical system, now applied chiefly to a certain measure of kauris and copper money. The old fanam was of gold only, and was one-sixteenth of a hūn. In the 'Lilāvati' we find sixteen pana—one dharan,<sup>3</sup> sixteen dharan—one nishk;<sup>4</sup> where the dharan (or dharam) seems to accord with the hūn, which, as before said, is identical in weight with the Greek drachma. The Ikkeri pagoda still contains sixteen fanams: that of Virarūl and Anandirūl, fourteen; and the Kalyan pagoda, twenty-eight. The division adopted by the English was forty-two.

'Kās' may be a corruption of the Sanskrit word Karsha,<sup>5</sup> which is mentioned in Colebrooke's 'Essay on Indian Weights,' as the same with the pan: 'a Karsha, or eighty raktikās<sup>6</sup> (ratia) of copper is called a pana, or Karsha-pana.' It is now the eightieth part of a pan, but similar discrepancies are common throughout, and the simple word is all that can be identified as having survived the changes of system.

As accounts were formerly kept at Madras in this currency, the following particulars extracted from Kelly's 'Cambist' will be found useful for reference:

<sup>1</sup> According to the old system, accounts are kept in star-pagodas, fanams, and kās.

8 kās = 1 fanam.

336 kās = 42 fanams = 1 pagoda.

The Company reckon twelve fanams to the Arcot rupee, and three and a half rupees to the pagoda. The bank exchange fluctuates from thirty-five to forty-five fanams per pagoda, the latter being a gold coin, and the former of silver; but fanams were also coined of base gold. Copper 1-, 2-, 3-, and 12-kās pieces were coined in England, by contract, for Madras as early as 1797; the 12-kā is also called 'dodo' and 'fidūa.'<sup>7</sup>

The star-pagoda weighs 52.56 grains, and is nineteen one-fifth carats fine: it is, therefore, intrinsically worth 7s. 5½d. sterling; but it is commonly valued at 8s. Many varieties of the pagoda circulate on the Coromandel coast, which will find their places in the General Table.

<sup>1</sup> मत्स्य	<sup>2</sup> पणं	<sup>3</sup> धरन्	<sup>4</sup> निष्क	<sup>5</sup> कर्ष
<sup>6</sup> रक्तिका	<sup>7</sup> कर्षपण		<sup>8</sup> فلوس plural of فلّس	

In 1811 a coinage from Spanish dollars took place, consisting of double rupees, rupees, halves, and quarters; and pieces one-, two-, three-, and five-, fanams; the rupee weighed 186·7 grains. A silver coinage of half- and quarter-pagodas of dollar fineness also then took place; the half-pagoda weighed 326·73 grains troy, and was equal to  $1\frac{1}{2}$  Arcot rupees. By a proclamation of 7th January, 1818, the silver rupee of one hundred and eighty grains was constituted the standard coin, and all accounts and public engagements were ordered to be converted at the exchange of three hundred and fifty rupees per hundred pagodas.

The proportion between the old and new currency is therefore now  $3\frac{1}{2}$  rupees per pagoda; and in copper seventy-five kās old currency = fourteen paisā new currency.\*

## MUSALMAN SYSTEM.

The Musalman system, of which the muhr and the rupee are the characteristic denominations of coin, assumes at the present day a multifarious appearance from the great variety in weight and value of the rupees current in different parts of India. That they have a common origin; and, in fact, that most of the rupees now issued from the Native mints of Central India are of modern date, is easily proved, since they almost all bear the impress of Shāh 'Alam, like our own coin.

The silver rupee was introduced, according to Abū'l-fazl, by Shīr Shāh, who usurped the throne of Dillī from Humāyūn in the year 1542. Previous to his time, the Arabic dirham<sup>1</sup> (silver drachma), the gold dīnār<sup>2</sup> (denarius auri), and the copper fālūs<sup>3</sup> (follis) formed the currency of the Moghul dominions. Shīr Shāh's rupee had, on one side, the Muhammadan creed; on the other, the emperor's name and the date in Persian; both encircled in an annular Hindī inscription. Since 'the same coin was revived and made more pure' in Akbar's reign, we may assume the original weight of the rupee from Abū'l-fazl's statement, to have been eleven and a quarter māshas<sup>4</sup>; Akbar's square rupee, called from its inscription the Jalālī,<sup>5</sup> was of the same weight and value. This coin was also called the Chahār-yārī,<sup>6</sup> from the four friends of the prophet, Abu-bakr, Omar, Osman, 'Alī, whose names are inscribed on the margin. This rupee is supposed by the vulgar to have talismanic power.

Concerning the weight of the māsha some difficulty prevails, as this unit now varies in different parts of India. Mr. Colebrooke makes it seventeen grains and three-eighths nearly; but the average of several gold and silver jalālīs of Akbar's reign, found in good preservation, gives 15·5 grains, which also agrees better with the actual māsha of

<sup>1</sup> درهم                      <sup>2</sup> دینار

<sup>3</sup> This name is still preserved on the Madras paisā or Kās piece.

<sup>4</sup> माष. माश              <sup>5</sup> जलाली              <sup>6</sup> चहारयारी

many parts of Hindūstān.<sup>1</sup> By this calculation the rupee originally weighed 174.4 grains troy, and was of pure silver (or such as was esteemed to be pure). The same standard was adopted by the Emperor Akbar, and accordingly we find coins of Akbar's reign dug up in

<sup>1</sup> The following are the māsah weights sent home for examination in 1810, as published in that highly useful work, Kelly's 'Census':

Jāina māsah .....	15.373 grs.	The Patna māsah is called...	15.5 grs.
Bellary .....	14.687	The Benares from several	
Malwa .....	15.833	specimens .....	17.7
Surat .....	15.890	The Calcutta māsah, by	
Ahmednagar .....	15.708	Kelly .....	32.0
Puna .....	15.070	But probably this was a double māsah.	

The average of all these agrees nearly with the Akbari māsah.

A gold jālālī of Lāhor, rather worn, weighs 186.6: this may be the 12½ māsah coin mentioned by Abū'l-faiz, which would give fifteen grains for the māsah.

[I insert some incidental information on the subject of Shīr Shāh's coin-weights and values, which I had occasion to draw up some years ago. I insert the entire passage in this place as further illustrative of the true weight of the māsah.

"I have previously ('Coins of Pathān Kings of Delhi,' Preface, p. vii.) assumed, from existing specimens of the silver money of Shīr Shāh, that the original mint standard of his rupees was calculated at an average weight of 178 grains, if not more. Abū'l-faiz's statement on the point, scrutinised more critically than it has hitherto been, affords a singularly close confirmation of this inference. I find it recorded in no less than four excellent copies of the original Persian 'Ayn-i Akbari,' that the rupee of Akbar, which was based upon that of Shīr Shāh, weighed eleven and a half māsah, the same weight is assigned to these copies of the MS. to Akbar's jālālī, which is avowedly identical in value with the former.\* I mention this prominently, as Gladwin, in his translation (I. pp. 22, 25, etc.) has given eleven and a quarter māsah as the weight of each of these coins; and Prinsep, in accepting Gladwin's figures, was led to place the weight of the old rupee at nearly four grains below its true standard.

"There is some doubt as to the exact weight we are to allow to the māsah, which varied considerably in different parts of India. Prinsep has determined the Delhi māsah to be 15.5 grains, and admitting this, the result shows Shīr Shāh's rupee to have weighed 176.25 grains of what was esteemed pure silver.

"The assignment of 15.5 grains to the Shīr Shāhī māsah is equally well borne out in the test afforded by Akbar's own coins. In order to avoid the very probable error of mistaking the identical class, among three but little varying denominations of the gold coinage, to which any given specimen within our reach should belong, I confine my reference to the silver money of Akbar, which, though differing in its various instages, in types and legends, was preserved, in effect, uniform in weight and value. Marsden has contributed an example (No. DCCCXIV.) of a square jālālī of this Padshāh, weighing 176.5 grains: had the tālā at this time been fixed at 180 grains, this coin would contain four grains more than the law required; as it is, even allowing for wear, it shows a return of 15.5 grains to each of the 11½ māsah of 15.5 grains, which should, under the higher scale of weights, originally have constituted its total on issue from the mint.

"The adoption of this 15.5 grain māsah, as a standard, necessitates a concurrent recognition of a proportionally increased weight in the tālā as then in use; we can scarcely suppose the twelve māsahs composing the tālā to have aggregated 186 grains, while the tālā itself remained at the 180 grains modern usage has assigned it. We have fortunately on hand a second means of proving the question, in the due determination of the intrinsic contents of the pieces composing the lower currency of the period, and the result will be found to show sufficient confirmation of the theory which places the māsah of Shīr Shāh at 15.5, and the tālā at 180 grains troy.

\* Gladwin, 'Ayn-i Akbari,' I. 62, 53, 79. See also note 2, p. 6.

various places, and worn, weighing from one hundred and seventy to one hundred and seventy-five grains.

Cabinet specimens of the coins of Jahāngir, Shāh Jahān, and Aurang-zib have also an average weight of one hundred and seventy-five

Forty dams of copper, we are told, were in Akbar's time equivalent in account, and ordinarily in exchange, to one rupee, and the dam of copper is itself defined at 5 tanka, or 1 tola 5 masha and 7 rata in weight. The measure of value thus specified is likewise distinctly stated to be a continuation of a previously existing species of money, which at the moment when Abū'l-fazl wrote, went by the name of 'Dām.' There can be but little hesitation in admitting, almost *prima facie* on the evidence available, that the copper pieces classed under Nos. 155, 156, Vol. xv., 'Numismatic Chronicle,' were the identical coins of Shīr Shāh, to which the succeeding dams of Akbar were assimilated; or, in other words, that they were in weight and value (whatever their name) the dams of the Afghan Sultan. It is a nice point to determine the precise contents in grains attending the original mint issue of these coins; but first taking the figures now proposed for masha and tola, we obtain from 1 tola 8 masha and 7 rata, at 180 per tola, a sum of 323.5625 grains; and then testing this return of the actual present weight of extant coins, we obtain a very reasonably close approximation to our figured result. It is true that the general average of the various extant provincial coins of this class minted during the reigns of Shīr Shāh and his Afghan successors, would necessarily run somewhat below the rate of 323.5 grains; but we have to allow a considerable per centage for loss by wear in such heavy coins, especially composed as they are of copper, which metal would always continue more freely current, and consequently suffer far more from the abrasion incident to frequent transfers, than the more carefully guarded and less readily exchanged silver and gold. However, we may, without claiming too much margin on these grounds, fairly consider ourselves within the mark in identifying the general series of coins under review as having originally an intentional standard of 323.5 grains, inasmuch as we can at this day produce several specimens of the obverse weighing 322 grains, and in one instance of a Hindustani, we can reckon no less than 329 grains. Added to this, we have the evidence of Ferishta that in his day there was a *paikā* (or fixed weight—پایہ) which was rated at 1½ tola, which, at 180 grains the tola, gives even a higher return of 324.5 grains.

At the same time, on the other hand, it would be impossible to reduce the coins that furnish our means of trial, to anything like so low a general average as would admit of 314 grains (or the produce of the simple 180 grains total) being received as the correct issue weight.

Adopting, then, the rate of 323.5 grains as the legitimate weight of these copper pieces, forty of which exchanged against a rupee, we have a total of 12,940 grains of copper as equal to 178 grains of silver, which determines the relative value of silver to copper as 1 to 72.7. If this be a correct estimate, there were in each dam 9.29 chitals,\* and in the Shīr Shāhi rupee 371.8 chitals, instead of the old 320 divisional coins of that name and value, which went to the lighter silver piece of former days, when also the comparative value of silver and copper stood at a more favourable ratio for the latter.—E.T.]

[Colonel William Anderson, C.B., an officer who has had extensive experience in

\* پهلوی (Pehlvi, پهلوی Fārsī, *palāw*); 2) Obolus et res quævis obolis similis, ut squama piscis, simil. (فلوس) Borchani Kātib. Inde پهلوی n.e. Pehmā defectus.—Vallens. See also 'Journal of the Asiatic Society of Bengal,' vii. 508, and Frahn's 'Recessio,' p. 207, etc. Abū'l-fazl says the پهلوی of olden days was equal to four tola. —Gladwin's 'Ain-i Akbari,' iii. 80. Ferishta again gives 1 or 1½ tola!

چیتل

grains pure, and the same prevails with little variation, up to the time of Muhammad Shāh, in the coins of opposite extremities of the empire; or struck in the Subahs of Sūrat, Ahmadābād, Dillī, and Bengal.

The following are a few examples of this agreement:

Akbari, of Lāhor.....	175.0 grains.	Shāh Jahāni, of Agra .....	175.0 grains.
— Agra .....	174.0 do.	— Ahmadābād .....	174.2 do.
Jahāngiri, Agra .....	174.6 do.	— Dillī .....	174.6 do.
— Allahābād .....	173.6 do.	— Sūrat .....	175.0 do.
— Kandahar .....	173.9 do.	— Lāhor .....	174.0 do.

To which may be added from the Table of Coins assayed at the mint, reckoning pure contents only:

Dillī Sonat .....	175.0 grains.	Dacca, old .....	173.3 grains.
— Alamgir ...	175.5 do.	Muhammad Shāhi .....	179.0 do.
Old Sūrat rupee .....	174.0 do.	Ahmad Shāh .....	172.8 do.
Murshidābād .....	175.9 do.	Shāh 'Alam (1772) ..	175.9 do.
Persian rupee of 1745 ..	174.3 do.		

The above quotations are sufficient to show that the Moghul emperors maintained a great uniformity in the currency of their vast empire. They were also tenacious of their privilege of coining, and we find from Abū'l-fazl that gold was only allowed to be minted at Agra, Bengal, Ahmadābād (in Gujarāt), and Kābul. Ten other cities were allowed to coin silver, namely, Allahābād, Sūrat, Dillī, Patna, Kashmir, Lāhor, Multān, and Tānda; while, besides the former, twenty-eight towns of minor note were permitted to fabricate copper money, viz., Ajmir, Oudh, Attak, Alwar, Badāon, Benāres, Bhakar, Bhara, Patan, Jaunpūr, Jālandhar, Sahāranpūr, Sārangpūr,

consensus with Indian weights and measures, has favoured me with the subjoined independent results of his calculations on the general question.

I am inclined to consider that the weight of the ratt may be assumed, perhaps as an extreme proportion, as high as 1.93 grains, and the masha at 15.44 grains, which will give the following return for the gold, silver, and copper coins of Akbar's time:

Afshā .....	225 grains.
Jalāl .....	187 do.
Round mahr .....	169 do.
Rupee (silver) .....	177 do.
Dām (copper) .....	307 do.

The result tabulated in correspondence with these data appears as follows:

1 Rati —	1.93 grains.
8 Rati — 1 Masha —	15.44 "
4 Mashas — 1 Tank —	61.76 "
3 Tanks* — 1 Tola —	185.2 "
1,666 Tolas — 1 Dām* —	307.4 "
30 Dāms — 1 Ser —	9222.0 "
40 Sers* — 1 Man —	268,880.0 "

The relative values of the metals are estimated by Colonel Anderson—

Gold to silver .....	9.4 to 1
Silver to copper .....	76.0 to 1 —E.T.]

\* टङ्क टांक also टङ्क gold, money, a particular species of coin.

دām

سیر (Ser)

Sambhal, Kanauj, Rantambhor, Hardwar, Hissar, Kalpi, Gwáliar, Gorakhpúr, Kalánor, Lukhnow, Mandau, Nágur, Sirhind, Siálkot and Sarauj.<sup>1</sup>

The whole of the discrepancies which we now find in the rupees of various places seem to have arisen out of the disturbances and breaking up of the empire in the reigns succeeding Muhammad Sháh, when numerous mints were established by ministers and by the viceroys of the principal Súbahs who were assuming independence; and the coin was gradually debased as the confusion and exigencies of the time increased. The Maráthi and other Hindú states also established mints of their own, retaining, for form's sake, however, the Emperor's name and superscription, as a titular avowal of Dili supremacy.

We may thus trace with tolerable accuracy the causes of the difference in the currencies of our own provinces, and the happy chance which brought those of Madras, Bombay, and Farrukhábád to such close approximation.

The extent to which the irregularities of the mints had proceeded in the turbulent reign of Sháh 'Alam is thus described in the preamble of Regulation XXXV., 1793, the first which treats of mint matters:— 'The principal districts in Bengal, Behar, and Orissa had each a distinct silver currency, consisting either of nineteenth sun Moonsabadahedees, or old or counterfeit rupees of various years coined previous or subsequent to the Company's administration.' The circumstance of the date of coinage being inserted on the coin enabled the shroffs<sup>2</sup> to recog-

<sup>1</sup> [As likely to assist those who would desire to trace these names on the original coins, I subjoin an alphabetical list of Akber's mints in the Persian character, extracted from MSS. of Abú'l-fauz's 'Ayn-i Akbari.'

33 کلانور	23 سرونیج	12 بهکر	1 اٹک
34 گوالیار	24 سرهند	13 بهرہ	2 اجمیر
35 گورکھپور	25 سنہل	14 پٹن	3 احمدآباد
36 لہور	26 سورت	15 پٹنہ	4 آگرہ
37 لکھنؤ	27 سہارنپور	16 ٹانڈہ	5 الور
38 مہمرہ	28 سیالکوٹ	17 جالندھر	6 الہ باس
39 ملتان	29 قنوج	18 جونپور	7 اودھ
40 منڈو	30 کابل	19 حصار (غیروزہ)	8 اوجین
41 ناگور	31 کالجی	20 دہلی	9 بداون
42 ہردوار	32 کشمیر	21 رنتھپور	10 بنارس
[E.T.—		22 سارنگپور	11 بنگالہ

<sup>2</sup> سرف *sarraf*, 'a money-changer.'



nize each, and so to apply the *battá*<sup>1</sup> to which the known debasement of each entitled it: it was rather a convenience therefore to restrict the circulation of one species to one district, although so much deprecated in the Regulation in question. In exchanges from one place to another, there however, might be, as stated, room for much abuse among the money-dealers. The Company resolved to remedy this evil in 1793, by declaring that all rupees coined for the future should bear the impression of the nineteenth year of Sháh 'Alam, and thus, by its adoption at that early period, it has happened that the *sikká* rupee is the only one of their coins which retains the full value of the original Dillí rupee at the present day.

The *Súrat* rupee of the Moghul Emperor was in like manner about the same time adopted as the currency of the Bombay Presidency: it weighed 179.314 grains, and contained 172.4 pure, being thus nearly equal to the Dillí rupee. By an agreement of the English government with the Nawáb of Súrat, the rupees coined by both were to circulate at par, and they were mutually pledged to preserve its standard. The Nawáb's rupees, however, were soon found to contain 10, 12, and even 15 per cent. of alloy; in consequence of which, the Bombay rupees were melted down and re-coined at Súrat; the coinage of silver in the Bombay mint was suspended for twenty years, and the *Súratís* alone were seen in circulation. At length, in 1800, the Company ordered the then *Súrat* rupee to be struck at Bombay, and thenceforth it became fixed at 179 grains weight, 164.74 pure. The *muh*r was also equalized in weight thereto.<sup>2</sup> Lastly, in 1829, under orders from the Home Government, the currency of the West was equalized with that of Madras, by the adoption of the one hundred and eighty grain rupee and *muh*r.

The *Arco*t rupee, according to our Assay Tables, in 1788, still retained one hundred and seventy grains of pure silver, and subsequently, when coined at the mint of Fort St. George, it had a weight of 176.4 grains, or 166.477 grains pure, until the new system was introduced in 1818, and the Madras one hundred and eighty grain rupee was established. From some reason or other, perhaps from commerce between the places, the Chittagong and Dacca currency formerly consisted of *Arco*t rupees; and they were for some time coined expressly for those districts at the Calcutta and Dacca mints; the average of many of various denominations still circulating in Chittagong agrees closely with the Farrukhábád rupee.

It would be a difficult task to unravel the progress of deterioration of the currency in the Upper Provinces, the more immediate seat of revolutions in the eighteenth century. But one instance may be given,

<sup>1</sup> बट्टा *battá*, 'difference or rate of exchange.'

<sup>2</sup> Kelly's 'Camhiat,' vol. i, p. 24.



in the Najibabad rupee, as an example of the conduct of all the other mints. One hundred specimens of this species of rupee, of different dates, now current in Muradabad, were selected by the Collector of Bijnor for examination, in 1832. It may be observed, *en passant*, that many of the discrepancies in our Tables between coins of one denomination are doubtless owing to the neglect of noting the dates of their fabrication when sent for assay; the knowledge of the variation in value of the coins of various years, as before stated, led to the system of battá early introduced and fostered by the money-changers, to the perplexity of accounts and money transactions, and the nullification of legislative enactments.

The Najibabad mint was established by Najib-ud-daula, the Rohilla chief who exercised so powerful a sway on the fortunes of the last monarchs of Delhi. The Bareilly and Chandauli mints were also under his control. The rupees struck by him and by Zabita Khan were originally of the Delhi standard; few of these are now met with, as they are in demand for silver ornaments, &c. From the year 26 of Shah 'Alam (1784-5) to 43 (1801-2) they evince a gradual deterioration, both in weight and fineness. The province of Rohilkhand was, during the whole of this time, annexed to the Subah of Oudh, as shown by the symbol of a rohi<sup>1</sup> fish on the field of the coin. The three first assays in the list are from single coins, the remainder are averages.

*Weight, Assay, and Value of the Najibabad rupee, from A.D. 1778 to 1801-2.*

Inscription, the usual Shah 'Alam distich, year of reign, and Hijra date. Symbols, a fish on the obverse, a crescent on the reverse.

By whom coined.	Year or year of reign.	Weight Troy.	Assay.	Value of the in Pd. Rs.
Najib-ud-daula.....	20	172.6	11½ Br.	101 9 6
	22	172.6	12 Br.	102 2 4
	23	172.2	12½ Br.	102 2 6
Zabita Khan.....	24	172.3	12 Br.	101 8 6
	25	172.4	10 Br.	100 2 0
	26	172.4	9 Br.	99 11 0
Ghulam Kadir.....	28	171.1	10 Br.	99 6 0
	30	171.0	5½ Br.	97 10 6
	32	169.5	8 Br.	97 9 0
	33	170.0	7 Br.	97 7 0
	34	170.2	6½ Br.	96 14 8
	36	170.0	7 Br.	97 10 0
	37-39 40	171.1	5 Br.	97 3 6
	41	169.5	2 Br.	95 7 2
	42	169.3	1 Br.	94 7 9
	43	169.0	Stand.	93 14 3

<sup>1</sup> = रोहित, rohi.

Thus, in the course of twenty-three years, a deterioration of nine per cent. was effected. So gradual a change, however, should rather be ascribed to the malpractices of the mint officers, than to any fraudulent intention of the government.

The Nawáb-Vazir of Oudh had mints also at Lucknow, Benáres, and Farrukhábád: in these the same process was going forward, until arrested by the successive acquisitions of the English.

The Benáres mint had been established by Rájá Balwant Singh, under a Sanad<sup>1</sup> from Muhammad Sháh, in 1730. It remained under Native management for twenty years after the province was ceded to the Company in 1775. The rupee had the full weight of one hundred and seventy-five grains, and was  $2\frac{1}{2}$  per cent. better than the present rupee, or about equal to the Dilli rupee of that date. It fell in value subsequently about four annas per cent., and there, of course, remained under English management until it was abolished in 1819, and the Farrukhábád rupee substituted in its stead.

The Lucknow rupee struck at the Fatchgarh mint had in like manner gradually diminished to 185.2 grains pure, when the Doáb was ceded to the British in 1802, and when it was assumed as the standard rupee of the new territory<sup>2</sup> under the designation of the Lucknow forty-fifth anna sikká, more commonly called the Farrukhábád rupee.

We have thus endeavoured to trace briefly the origin of the three, or rather four, coins chosen for the circulation of the Company's territories, and have explained how it happened fortuitously that the Bombay, the Madras, and the Farrukhábád (or Sonat) rupee are nearly of the same intrinsic value.

	Pure contents.
Arree rupee .....	165 grains.
Bombay .....	164.7 "
Farrukhábád .....	165.2 "

The alteration of the standard of purity, in 1818, did not affect the proportion of pure metal, but the facility of equalizing the three coins had been observed both in England and in India; and had been the subject of frequent Minutes by the Court, by the Indian Government, by the Mint Committee, and the officers of the mint; and when Sagar mint was established in 1825, it was ordered to coin new Farrukhábád rupees of one hundred and eighty grains weight, the same as the standard of Madras, or containing one hundred and sixty-five grains pure.

The Benáres mint alone continued to coin Farrukhábádis of 180.234 grains until its abolition in 1829: and the Calcutta mint since coined

<sup>1</sup> *Sanad*, *sanad*, 'a grant, warrant, charter.'

<sup>2</sup> Reg. XI. 1805.

them of the same weight, until the opportunity was taken finally of equalising the whole by Regulation VII. 1833.

A few words are now necessary to explain the progress of debasement in the coinage of Haidarâbâd, Nâgpur, Sâgar, the Rajpût and other states of Central India, as far as the imperfect data at our command will permit: they are chiefly derived from the reports of the government officers in Ajmîr, Mâlwa, and the Narbadda provinces, to queries circulated through the Mint Committee in 1818 and 1823, when the important question of equalising the coinage of Central India was under agitation.

We have before remarked, that none of the coins now forming the circulation of Hindûstân bear any other name than that of Shâh 'Alam, and although we have no perfect information of the origin or date of the mints of Puna, Nâgpur, or of the principal states of Râjpûtânâ, still we may safely assume that, until the authority of Dillî was annihilated, the representative of the monarch in the various Sâbahs, or provinces, alone exercised the privilege of coining: and that even when it was assumed by chieftains already in actual independence, the form of a medal or permission from the Emperor was obtained by purchase or extortion. The petty Râjâ of Dattish, for instance, was indignant at the supposition that he had opened his mint without authority,<sup>1</sup> and of all the chiefs within Lieut. Moody's agency, Râjâ Pratâp Singh of Chattrapûr was the only one who could not produce his authority. The chiefs of Jhânsî and Jâlsou cited the sanction of the Peshwâ: the Tâhrî Râjâ, the tacit permission of the English. No notice, however, of mints was found in any of the sanads or treaties to which that officer had access.

When first established, the mints were no doubt in most cases made the source of fraudulent profit to the government, by the issue of a debased coin, which was supported at an enhanced nominal value, through the interdiction of the purer standards of neighbouring districts. A Hindû prince, or the minister who rules for him, is in general a money-dealer; thus at Kotâ the executive authority has a shroff in each town, and participates in all the benefits arising out of money operations in the market. In Jaipûr and Kotâ there exists an usage that the currency should suffer a depreciation of one per cent. on the third year after its issue, and continue at that rate during the reign of the sovereign: on the accession of his successor, it suffers a further annual fractional depreciation, which operates to bring the whole of the circulating medium into the mint for re-coinage.<sup>2</sup> This rule does

<sup>1</sup> Report of Lieut. T. Moody, agent at Bughl and Kantâl, 17th February, 1284.

<sup>2</sup> Major J. Caulfield, Political Agent in Harvati, 1st August, 1823.

not, however, extend to the other Rājput states, nor does any debasement appear in the Kotā rupee to warrant a censure of the system there prevailing. It is such a measure as Tantiā Siudīa's, who abolished the standard Ajmīr currency, and instituted the debased Śrīśāhī rupee in 1815, on a false supposition of increasing his revenue, that is so pernicious in its effects: or the more inexcusable conduct of the Gwālār government, which, while maintaining the currency of the capital at a good standard, issues inferior coin at its provincial mints of Chāndēri, and even coined debased Bālāsāhī rupees at Garrah-Kotā, in imitation of the currency of Sāgar.<sup>1</sup>

The list of mints which have sprung up in central India is so formidable that it is difficult to attempt any classification of them.

Mr. Wilder, in 1819, enumerates the following rupees extant in Ajmīr: old Ajmīr, Śrīśāhī, Kishnagarh, Keshenagar, Chittor, Jaipur, Hālī, Jodhpūr, Oodipūr, Shāhpūrah, Pratāpgarh, Kotā, Bāndī, and Bhītwarī. Mr. Maddock furnishes an equally long list from the Narbadda:—Pannā, Chatrapūr, Saranj, Jhānsī, Chanda, Srīnagar, Nāgpūr, Garrah-Kotā, Bālāsāhī, Rāthgarh, Tāhri, Bhopāl, Sahāpūr, Sudhaurāh, Jālaon, Ujjain, Isargarh. The difficulty is also increased by the threefold appellations given to coins: first from the place of fabrication, as Indor, Ujjain, Sāgar proper, etc.; second, from the person issuing them, as Śindīāsāhī from Śindīa; Bālāsāhī, from Bālājī Pandit; Gaurāsāhī from 'Alī Gaur, afterwards Shāh 'Alam; Mutī-sāhī, a well-known Allahābād coin of Mr. Achmuty; third, from some distinguishing symbol impressed on the field, as Trīsāhī, from the 'trident' of Śiva; Shamsāhī, from the figure of a 'sword' on the Haiderābād coin; the Macbhlāsāhī, and Shīrāsāhī, from the 'fish' and 'tiger' of the old and new Lukhnow rupee, etc. There are also other titles common to different localities, as Chalan, 'current'; Hāk 'of the present time'; and the distinction into Sams, or different years of Shāh 'Alam's reign. It should be remarked that Shāhī and Sālī attached to the designation of a coin have totally different meanings; the former denoting 'king,' the latter merely 'impress or stamp.'<sup>2</sup>

The following notes concerning the origin of particular mints, and the amount of their issue, are derived, as before stated, from the reports of Messrs. Wellesley, Molony, Wilder, Maddock, Macdonald, Caulfield, and Moody, between 1819 and 1823.

In Ajmīr the Śrīśāhī rupee, coined by Tantiā, formed in 1815 the principal currency; it has been partially supplanted by the Farrukh-

<sup>1</sup> Maddock, 12th June, 1819.

<sup>2</sup> It is, however, doubtful whether the terminal *sāhī* is not a more vulgar application of *shāhī*, the original distinction of rupees being *sāhī* into those of different sovereigns.

abad rupee since the province came into our possession. In Kotá there are three mints, at Kotá, Jantís Patan, and Gangroun, coining on an average thirty-six lakhs per annum: the currency is not debased.

The Holkar currency of Indor, Hardá, and Maheswar, and the Ujjain rupee, are nearly at par with the Farrukhabád, but they maintain an unequal contest with the Sálímsháhí rupee, coined by the Rájá of Pratápgarh, of which there are three kinds, the *jurmura*, 150 grs. pure; the *murmura*, 145 grs. pure, coined in 1810; and the *melah* of 1820, only 137 grs. pure.<sup>1</sup> The Rájá engaged in 1821 to reform his coinage, but it has never been done.

The Bándí debased rupee is also current about Ujjain. It seems by the Assay Table to have been reformed in 1825.

The northern parts of the Narbadda territories were supplied with a base currency struck at Jabalpur, by Nána Ghatka, in 1800; this mint was suppressed on cession to the English. The southern part (Dakhantír) had a rupee of still lower value struck at Sohágpúr, where a mint was established in 1810; it was abolished in 1818 by Mr. Molony.

These rupees passed at par with Chanda and Nágpúr rupees, the chief issue of Berár.

The Sagar mint was set up in 1779, by the Peshwá's officer at Garrah Mandiah, and coined about seventeen lakhs of Rájásháhí rupees per annum. Its operation continued under Mr. Maddock, who, to counteract the forgery going on at Garrah, inserted the word 'Sagar' in small English characters on the die. The new Sagar mint, erected in 1824, is now rapidly removing all the old coins from circulation.

The standard of the Maráthí Government of Nágpúr, to which all the neighbouring mints were, doubtless, intended to conform, presents, itself, one of the worst examples of irregularity and depreciation. Even after the establishment of a British Residency, having a nominal control over such matters, a further debasement to the extent of eight per cent. is proved to have been effected, owing to the vicious policy of farming the mint to a native contractor for an annual sum of 35,000 rupees.

In the Haidarábád country, the government of the Nizám, or of his Hindú minister, has not been behind hand with its Maráthí rivals in the adulteration of the local currency. The weight of the rupee (174 grains) shews its original agreement with the Dillí standard, but the pure metal is gone down to 147 grains; and by way of introducing greater confusion and vexation, there is a superior currency for the Palace and the Residency, an inferior for the city, and a *hukm chaláni*,

<sup>1</sup> A. Mardonald, 13th August, 1825.

or forced token, the precise nature of which is dubious; the worst species are struck at Nārāyanpat.

In Bandalkhand, the circulation consisted chiefly of Balā Rāo's rupee, struck at Srīnagar, near Pannā. This mint issued at the time of its institution, in 1794, about eighteen lakhs per annum; but after 1819, the coinage fell to four lakhs. The same prince set up a mint at Jālan, his capital, in 1809: its issue was, at first, six lakhs, and is now diminished to one-third of that amount.

The Hansī mint of Rāo Rām Chand dates from 1780: it issued three lakhs. Kuar Pratāp Singh's at Chatrapūr dates from 1816. It is said that Chitra Sāl used formerly to coin there.

The mints of Pannā (1780) and Samter (of 1808) were on a most insignificant scale, and have been put down. The Dattiah mint, already mentioned, dates from 1784.

With a view to the reform, in part, of this complicated system, of which a few points only have been brought to view, the Government resolved on the 10th September, 1824, to abolish the Pannā, Hansī, Jālan, Urcha, and Chatrapūr mints, and to effect a reform of that of Pratāpgarh; the order was enforced in December, 1826. The Bhopāl Nawāb also engaged to equalize his rupee with that of Indor and Ujjain, and to abolish the Bālisāhī mint. It was thought too great a step to attempt a restoration of the Nāgpūr and Haidarābād currencies; and as the silver in them averaged 144 grains, while that of our rupee was 165, it was proposed to engage the Nāgpūr Rājā to coin fourteen-ānā pieces; and the Nabadda Commissioner was empowered to do the same for Jabalpur and Sagar: but he had already made an arrangement,<sup>1</sup> which, while it relieved the ryots, served to introduce the new sixteen-ānā rupee with facility: this was to receive, for all settlements made in the local currency, 100 Farrukhābād rupees for every 120 Nāgpōrīs<sup>2</sup>; their intrinsic equivalent being 118½. Were the same principle acted upon in the Nāgpūr and Haidarābād states, there could be no difficulty in accomplishing the object so much desired. As for the numerous tributary and subsidiary states, there could be no injustice in refusing them the privilege, which is of little profit, and which is in general a modern usurpation on their parts: at any rate they might be obliged to conform to the universal standard. 'We are too apt,' says Mr. H. Mackenzie, 'to let the mere exemption from the printed code be taken as an exemption from all law, and to deny to a large portion of India the benefits it would derive from the just discharge of the duties belonging to the paramount power.'<sup>3</sup>

<sup>1</sup> Maddock, 3rd February, 1827.

<sup>2</sup> The same rate is used in paying the Bombay troops at Aurangābād, in the Govind Bakhsh, or Haidarābād currency.

<sup>3</sup> Mint Committee Records, September, 1824.



The standard of Panná, under the Peshwá, was called the *Ankus* rupee, from *ánkus*,<sup>1</sup> the instrument used by the mahout to guide the elephant; probably a symbol marked on the coin. This rupee appears from Kelly's tables to have been extensively adopted as an unit in the estimation of value and weight, probably wherever the Maráthi ascendancy prevailed. It is current through the Dakhan and the Konkan. The Chanda rupee of Khándish circulates at par with it. In Gujarát there are several denominations of rupees, but the principal is the *Bálásáhi*, coined at Baroda.

It is not necessary to allude to the *Patiyalá*, *Bhartpúr*, *Dig*, and many other rupees, the names of which denote their origin and their place in the General Table. Still less need we advert to the *Korá*, *Allahábád*, *Agra*, *Saháranpúr*, *Baréllí*, *Kálpí*, *Atáwi*, *Mathurá*, *Pánipat*, and other rupees, which belong more immediately to the *Dihli* group, coined only on particular occasions or for short periods, and the mints of which have long since disappeared from our list.

There are, however, to the eastward in Assam a distinct class of coins bearing, in a Bengali inscription, the name of the *Rájá* of that province, since the time of *Rájá Budra Singh*. They present an example of good faith in these rude people, being in weight and purity equal to the former *Arast* rupee of Dacca, and some degree better than the present *Farrukhábád* rupee.

The circulating medium of *Nepál* is also essentially *Hindú*, and of such interest on that account, that we gladly avail ourselves of the permission to insert an account of the coinage of that state, drawn up by Doctor J. M. Bramley, in 1831.

#### COINAGE OF NEPÁL.

"The conquest of *Nepál* by the *Goorkhas* took place in the *Newar* year 888, corresponding with A.D. 1768. Prior to this epoch, the valley of *Kathmandu* was divided into three sovereignties, *Patan*, *Bhatgaon*, and *Kathmandu*, each governed by a *Rájá*: hence on the *Newar* coins the three series of *Rájás'* names are found. Those of *Bhatgaon* are generally (though not always) distinguished by a shell, those of *Patan* by a timool, and those of *Kathmandu* by a sword.

"It was formerly the custom for all money current north of the valley of *Nepál*, so far as the boundaries of Chinese Tartary, to be coined by one or more of the *Nepál Rájás*, which was a source of considerable profit to them: the *Bhotchs* giving them weight for weight in silver and gold dust; but this was discontinued during the reign of



Ranjit Mal, the last reigning Rājā of Bhutgaon, who sent them such base coins as to occasion a decrease of nearly one-half of their intrinsic value, which was no sooner discovered by the Bhoteahs than a desertion of the mint took place, and there has been no more Bhote coinage made in Nepāl.<sup>1</sup> The amount contracted for on this occasion was ten lākhs of silver mohurs, exactly similar to those current in Nepāl. The Bhoteahs, who now visit Nepāl for trade, profit by this spurious coin, which they take in exchange for their goods at five gandas per muhr, and they pass off in their own country as of full value, or ten gandas. As the Bhoteahs have no other currency, they are compelled to cut them into halves, quarters, and eighths. They are the only coin current in Lassa.

"The old coins of the 'Mala,' or Newar Rājās, are much valued for their purity, and are worn by the women, strung to necklaces or armlets, as tokens in memory of their ancestors.

"Since the Goorkha conquest, the Vikrama era has superseded that of Newar for ordinary purposes; and the Śāka, commonly used in Hindústān, has been introduced upon the coins. Rājā Prithvarān is the first Goorkha sovereign, from whose accession a regular series may easily be obtained. The inscriptions on the present prince's coins are *Sri Sri Sri Rajendra Vikrama Sah Deva*, 1738; and on the reverse, *Sri Sri Sri Gorakhnāth Sri Bhawan*.

"The gold and silver coins have the same names and divisions differing only slightly in weight.

Tanka.		Mohur.		Anka.		Anam.		Pya.		Dan.
1	=	2	=	4	=	16	=	64	=	400
		1	=	2	=	8	=	40	=	200
				1	=	4	=	20	=	100
						1	=	5	=	25
								1	=	5

"The mohur or eight-anna piece is the principal coin in use: it weighs 87 grains, and is therefore evidently identical with the Muhammadan half-rupee, but the quality of the metal has been much adulterated.

"The Nepālese procure all their silver from China, in the form of stamped lumps, as they are current in Lassa: for the Tibetans generally follow the Chinese custom in their money transactions of paying and receiving by weight, and the merchants carry scales with them for the purpose."

There are a few specimens, however, among Dr. Bramley's collection

<sup>1</sup> Mr. Cienza de Kécsa states that the English rupee circulates freely through Western Tibet.

of a Tibetan silver coinage struck at Lassa, having an inscription in both Chinese and Tibetan characters. Mr. Csoma de Körös interprets the purport of the Tibetan legend on one of these to be *G'tsang pahu*, 'pure piece;' or, as 'G'tsang' is the name of a large province in Tibet, lying next to Nepál, it may mean 'Tsang money.' It likewise bears a name, variable on different specimens, of former Emperors of China, H'chah-H'chih and Chian-lung. Besides this, in letters also, the date (25, 39, 60, etc.) of the Tibetan or Chinese cycle of sixty years.

The common Chinese brass money, with a square hole in the centre, is likewise current in Lassa, as generally through the whole of the Chinese empire.

Although not quite relevant to the subject of Indian coin, still, as Chinese silver forms so considerable a portion of the bullion importation of Calcutta, we may be permitted to insert a brief account of the Chinese system, from that useful compendium, the 'Companion to the Anglo-Chinese Calendar,' for 1832.

## CHINESE CURRENCY.

Sycee silver, in Chinese 'Wan-yin,' is the only approach to a silver currency among the Chinese. In it the government taxes and duties, and the salaries of officers, are paid; and it is also current among merchants in general. The term Sycee is derived from two Chinese words, *Se-see*, 'fine flow silk,' which expression is synonymous with the signification of the term 'Wan.' This silver is formed into ingots (by the Chinese called *shoes*'), which are stamped with the mark of the office that issued them, and the date of their issue. The ingots are of various weights, but most commonly of ten taels each.

Sycee silver is divided into several classes, according to its fineness and freedom from alloy: the kinds most current at Canton are the five following:—

1st. Kwan-heang, 'the Hoppe's duties,' or the silver which is forwarded to the imperial treasury at Peking. This is ninety-seven to ninety-nine touch. On all the imperial duties, a certain per-centage is levied for the purpose of turning them into Sycee of this high standard, and of conveying them to Peking without any loss in the full amount. The Hoppe, however, in all probability increases the per-centage far above what is requisite, that he may be enabled to retain the remainder for himself and his dependants.

2nd. Fan-kuo or Fan-foo, 'the treasurer's receipts,' or that in which the land-tax is paid. This is also of a high standard, but inferior to that of the Hoppe's duties, and being intended for use in the

<sup>1</sup> By the natives of India  *shuh*, or 'hoofs.'

province, not for conveyance to Peking, no per-centage is levied on the taxes for it.

3rd. Yuenpau or Une-pe, literally 'chief in value.' This kind is usually imported from Soochow, in large pieces of 50 taels each. It does not appear to belong to any particular government tax.

4th. Yen or Een-beung, 'salt duties.' It is difficult to account for these being of so low a standard, the salt trade being entirely a government monopoly. This class is superior only to

5th. Mut-tao or Wuh-tao, the name of which, signifying 'uncleansed or unpurified,' designates it as the worst of all. It is seldom used, except for the purpose of plating, or rather washing, baser metals.

The tael of Sycee in the East India Company's accounts is reckoned at 6s. 8d. sterling. When assayed in London, this metal is frequently found to contain a small admixture of gold. Mercantile account sales give the following average out-turn of China bullion remittances to London, Calcutta, and Bombay; that

100 taels of Sycee yield	{ £ 316, at 6s. 8d. ss. (including 1½ per cent. for gold,
	{ 3075 sikki. Rs., or with charges 3062 Rs., at Calcutta.
	{ 3335 Bombay Rs., or " 3302 Rs., at Bombay.

#### AVA SPECIE.

The Burmese, it is well known, have no coined money, but, like the Chinese, make their payments in the precious metals by weight. Like the latter nation, also, they make use of decimal divisions in estimating the value or parity of gold and silver, and their systems of weights and measure follow the same convenient scale. We are indebted to Major Burney, Resident at Ava, for the following particulars:

Via, Tikal, and Moo are the general terms used in the transactions of commerce and accounts: their subdivisions and multiples are—

1 pu or bu.
2 = 1 moa.
2½ = 1 nai.
5 = 2 = 1 hkw.
10 = 4 = 2 = 1 kyt or tikal.
1000 = 400 = 200 = 100 = 1 peikha or visom.
(100 tikals are precisely equal to 140 talis).

The expressions employed by the goldsmiths in declaring the quality of bullion require a knowledge of the Burmese numerals, and a few other words:

NUMERALS.		METALS.	ASSAY TERMS.
1. Ta.	6. Khyonk.	Silver, gold. (Sawnee, red or pure gold.)	Dot, better or above.
2. Nheet.	7. Khwan.		Moo, differing x or —.
3. Thoun.	8. Sheet.	Ngwe, silver.	Mesdet, better in assay.
4. Lo.	9. Ko.	Go or kha, lead or alloy.	Mee shyonk, worse ditto.
5. Ngs.	10. Tahay.	Nee, copper. Byoo, tin.	Ma, adulterated.

The usual weight of the small lumps of silver current in the place of coin is from twenty to thirty tikals (thirty or forty tolas): they bear a variety of names from their quality and appearance, the figures given by the action of the fire upon a thick brown coating of glaze (of the oxydes of lead and antimony) answering, in some degree, the purpose of a die impression.

*Ban*<sup>1</sup> signifies 'pure' or 'touch,' and is the purest obtainable of the Burmese process of refinement.

*Kharobot*, 'shelly' or 'spiral circled,' is applied to a silver cake, with marks upon its surface, produced by the crystallization of the lead scoria in the process of refinement: it is supposed to denote a particular fineness, which, by Burmese law, ought to be ten-ninths yowetnee in value, i.e., nine tikals of kharobot pass for ten of yowetnee silver; or it should contain nineteen and a quarter ban and three-quarters copper.

*Yowetnee*, 'red-leaved' flower or star, silver, is so named from the starry appearance of the melted litharge on its surface. Yowet is a corruption of *roset*, 'leaf,' and the word is sometimes written by Europeans *rowance*, *rouni*, *roughance*, etc. Yowetnee is the government standard of Ava, and contains by law eighty-five ban and fifteen alloy per cent. Taking it at nine-tenths of purity of kharobot, which last is 94.6 touch, its quality will be 85.2 fine; which closely accords with the legal value. The average of 60,000 tolas of yowetnee in the late Ava remittance turned out two dwis. worse (90.8), but there was a loss of more than one per cent. in melting, from the exterior scoria.

*Dain*, the most common form of bullion met with in circulation, is so called from an assessment, levied during the late king's reign, upon villages and houses: *dain* signifying 'a stage,' or distance of two miles. These cakes also weigh from twenty to thirty tikals each. Their prescribed legal quality is ten per cent. better than yowetnee, which puts this species of silver on a par with kharobot. In practice, however, the quality varies from one to ten per cent. better (five Br. to thirteen and a half Wo.) than Calcutta standard. The average of fifty-two lakhs of dain turned out three pennyweights Br.

There is an adulterated dain silver, stated by Major Burney to be similar in quality to yowetnee, but in reality much worse (forty-two and a half pennyweights worse) lately introduced and extensively circulated: it is made by admixture of lead, and is called *Ma-dain*.

The following will serve as examples of the mode of evaluating bullion:

<sup>1</sup> This word is synonymous with the 'Bani' of the 'Avin-i Akbari.' Banwari is the Indian name of the touch needles used in roughly valuing the precious metals.

Dain, ko-moo-det, is Dain nine per cent. better. (See previous explanation.)

" nga-moo-det, " five per cent. better.

Yowetnee, " standard. (Eighty-five touch.)

" Kyat-gu, or to-tahay-gu, one tikal or tenth of alloy (meaning one-tenth weight of alloy added to standard).

" Kyouk-tahay nga-kyat-gu, six tens five tikal alloy (meaning sixty-five per cent. of alloy added).

" gyan, half yowetnee (and half alloy).

**GOLD.** The purity of gold is expressed by moos or 'tenths' only: ten moos, 'tshay moos,' (one hundred touch) being esteemed pure gold.

'King's gold,' or standard, is called Ka-moo-to pe-lo-yowa (nine moos, one pe, four seeds), or nine and three-quarter moos fine.

'Merchants' gold' is Ko-moo-to-tu, nine and a half moos fine. Gold muhrs are called eight and a half moos fine by the Ava assayers.

The out-turn of the Ava specimens will be given as an Appendix to the General Table.

Having now adverted to most of the groups and denominations of money, which are comprised in the following tables, it remains merely to explain the sources whence the materials for them have been collected. For the coins of the West of India, Mr. Noton's table, published at Bombay, in 1821, has been consulted, and, for India generally, the table published in Kelly's 'Cambist,' from the assays of Mr. Bingley, at the Royal Mint; but the principal portion is derived from the table printed, but not published, by Mr. H. H. Wilson, Assay Master at Calcutta, in 1833, from his own assays: indeed, almost all the coins inserted in the table have been frequently assayed, and generally in large parcels, at the Calcutta, Benares, and Sagar mints.

As Mr. Wilson's table gives the value in sikki rupees (of 191.916 grains troy), it has been necessary to recalculate the whole column of produce, which now, in the Silver Table, expresses the value of one hundred of each species of coin in the general standard British rupee of one hundred and eighty grains. To find their value in sikki rupees (of one hundred and ninety-two grains) it is only requisite to divide the Farrukhābid value by sixteen, and deduct the product, as explained in page 7.

The weight and pure contents are expressed in troy grains. The standard or assay is given both according to the decimal system and in the usual terms of assaying; viz., in carats, grains, and quarters, for gold,—and in pennyweights and halves for silver,—better or worse than the standard of the Company's coins, namely, eleven ounces fine and one ounce alloy.

The silver pound is divided into twelve ounces, or two hundred and forty pennyweights, or four hundred and eighty halves.

The gold pound into twenty-four carats, or ninety-six carat grains, or 384 quarters.

The 'intrinsic value' of the coins is the relative value of their pure metal, as compared with the pure contents of the gold muhr and the rupee. The mint price is two per cent. less, besides the charge for refining, according to the quality of metal, as stated in pages 9 and 12.

To find the value of any number of rupees, follow the rule before laid down; namely, multiply by the figures in the column of produce and divide by one hundred. For gold coins, if required in rupees, multiply further by the Regulation value, sixteen for the Calcutta, or fifteen for the Madras muhr; or if the bazar price be wanted, by the bazar price of the gold muhr for the time being. The decimal parts of the muhr and rupee may be converted into *ánás* and *pá'ís* by the Table, page 12.

It should be remarked, that the following tables are not intended as an authoritative list of the rates at which the various coins are received by Government, but solely to show their average intrinsic produce when brought to the mint as bullion to be converted into Farrukhabád rupees. Particular rules have been at different times promulgated, fixing the exchange at which military and other payments were to be made, and revenue to be received, in different currencies.

Such was the list published in Regulation III., 1806, which is now obsolete, being inconvenient in application, from its specifying the value by weight, and not by tale.

The following rules are still in force at the Government treasuries of the Bengal Presidency: the first has reference to the old current rupee of account, of which one hundred and sixteen were equal to one hundred *sikkás*: this imaginary money is now disused, except in the valuation of some few articles of the English market in the price current.

In the payment of troops and others connected with the Military Department,

111 *sikká* rupees, = 118 *Soná* or Farrukhabád rupees.

325 " = 350 Madras and Bombay rupees.

In payments to others not in the military service,

100 *sikká* rupees, = 104½ Farrukhabád or *Soná* rupees.

The established rates of *batta* on local currencies, fixed for the guidance of Revenue officers, are as follows:

*Benáres* and *Gouraháti* rupees, at par with Farrukhabáda.

104 *Barohá* rupees, = 100 Farrukh. Re. under Gov. Orders, 1st July, 1833

103½ Old Farrukhabád, = 100 " " " 29th Jan. 1833

103½ *Dihli*, 38th ann, = 100 " " " "

101 *Muhummadsháht*, = 100 " " " "

101 Old *Lakhnow*, = 100 " " " "

106 *Najibabád*, = 100 " " " 1st July, 1833

106 *Chandni*, = 100 " " " "

120	Chanda rupees,	= 100 Farrukh. Rs. ....	Under Government Orders, 19th August, 1833. The receipt of these coins at this rate, however, is limited to the public treasuries in the Raitâl, Souti, and Hochungbâd districts.
120	Nâgpur Rs. viz.	<div style="display: inline-block; vertical-align: middle;"> <div style="display: inline-block; vertical-align: middle;"> { Mahrâ, Nishampur, Dehmandyâ, Jahrâ, Manjhalli, 7 ams, Chhapâ, Old Hindû-son, </div> <div style="display: inline-block; vertical-align: middle; font-size: 3em;">}</div> </div>	= 100 do.
120	Jabalpur rupees,	= 100 Pd. rs. ....	
100	Arktâ rupees,	= 82½ sikkâ rupees, ....	{ For Chittagong and Balâsh, 22nd Jan., 1835.
120	Haidarâbâd rupees,	= 100 Bombay rupees, for payment of troops, etc.	
100	"	= 83 r. 14 s. 3 p. sikkâ, ...	{ For adjustment of accounts of Haidarâbâd Residency.
100	The Ikkeri, Bhol, Bhoipâdi, Bâdâri, and Farrukhî pagodas are taken at 387.3 Ankalî rupees at the Pôna treasury. <sup>1</sup>		
100	Gaddipâdi, Tadâk, Kadvanâjâ, Hâli, Modipâdi, and Bangalore pagodas, at 373 Ankalî rupees.		
100	Muhammadiyah and Venkatapâdi, at 337.3 ditto.		
100	Râjkrâm Ikkeri pagodas,	= 381	"
100	Bhâteri	= 325	"
100	Tonantels	= 308	"
100	Harpanhâli	= 343.5	"

## NATIVE COPPER COINS.

Our information regarding the copper coin in circulation throughout Central India is very limited, but it is well known that as much perplexity exists in the varieties of paisâ, and in the greater range of their value, as in the coins of the more precious metals; so that every town and village almost has its separate currency, and its established nirkh,<sup>2</sup> or, rate of exchange, with the rupee, to the great inconvenience of the traveller and of the poorer classes. In weight they vary from 280 grains (the Jaipurî, etc.) to 34 grains (the Maiwârî): the former passing at about 35, the latter at 378, paisâ for a rupee. From the small advantage of melting up copper money, it happens that much of the circulation in this metal is of very great antiquity; and not only many ancient Hindû coins are met with, but Bactrian and Roman copper coins are also frequently procurable at fairs and in the neighbourhood of old towns in Upper India.

The paisâ was in some cases adopted as the unit for determining the larger weights of the bâzra, as the Gurakhpûr paisâ, of which 530 were held equal to a *passerî*<sup>3</sup> (five *ams*) at Ghâzipûr, and generally through the Benâres province. 2881 "*chalans*"<sup>4</sup> of Fatehgarh in like

<sup>1</sup> Noton's table, 4th Aug., 1821. He states, however, that the rates may have varied since 1812, when they were established.

<sup>2</sup> نرخ. <sup>3</sup> پانچ سیر. <sup>4</sup> چلن



manner were assumed as the weight of a *masa* in that district. The Dhillí paisá, coined till 1818, was twelve *máshas* or one *tolá* in weight.

The Table at page 63 contains such a list of copper coins as the scanty materials at hand enables us to supply. Most of the native paisá contain more copper in proportion to their value than the present Company's coin, which was, however, originally one *tolá* in weight, and was gradually reduced to one hundred grains (as shown in the table); it is at present in fact a government token, worth, intrinsically, less than its nominal value.

Within the Ceded Territories the native coins still predominate, but the Company's paisá is now gradually spreading to westward, and the Ságur mint has for several years been employed in converting the native copper money into *Bemíras* or *trisáls* paisá of one hundred grains weight, and sixty-four to the rupee. At Bombay, the old paisá have been bought up by Government, for the purpose of removing them entirely from circulation, and substituting the new coin (described in page 4). The Bengal Government have also recently adopted a measure tending to withdraw the *trisáls* paisá (see page 8) from circulation, in consequence of their becoming much depreciated in public estimation from a large admixture of spurious coin, and other causes; the Calcutta mint being ordered to grant sixty-four new paisá for seventy-two *trisáls*, for an amount not under twenty rupees in value brought for exchange.

## SYMBOLS ON SHAH 'ALAM COINS.

It may naturally be asked, how the multitude of coins, gold, silver, and copper, included in the following lists, are to be recognised by any but a professed money-changer, since, as has been observed before (page 19), most of them bear the mere name and distich of Sháh 'Alam, and the place of coinage, being the lowermost word of the inscription (page 2), will seldom be found on the face of a coin showing, as is generally the case, only a small portion of the die. Many mistakes have doubtless been made in fixing the localities of coins, from this abundant source of error, and it is much to be regretted, that it has not on all occasions been made a primary point to ascertain the distinguishing mark of every specimen collected for examination.

Some rupees (as the *Sálimsáhl*, etc.) appear to be only distinguished by the peculiar imperfections of the Persian character they bear; others have but a few discriminating dots, like the private marks of our own mints; but the majority have a well distinguished symbol, the same on silver and on copper, by which they may be readily known on inspection. There is a further advantage in con-

sulting such marks, for they enable us at once to class together various coins as having been issued by the same authority. A list and plate of these symbols, confessedly imperfect, follows the catalogue of coins, but it may be convenient to assemble together here a few of the groups, whose connection is otherwise confirmed by the preceding remarks on the Bundelkhand and Rájputána mints.

The coins of Lukhnaw, Fatehgarh, Azimgarh, Bareilly, Najibábád, Benáres, and other places under the sálah of Oudh, bore the symbol of a rohu fish. The Agra paisá has a pistol.

The coins of Rohilkhand, Bhatpúr, Narwar, etc., a dagger.

Those of Nággpúr, Chanda, Haidarábád, Aurangábád, etc., a sword, hence called 'shamshíri.'

Those of Ságar, Jálaon, Srínagar, Kálpí, Tahri, (the Bálasáhi) have a trident or triśúl with a cross bar.

The coins of Bhópál, Bhilsá, and Báthgarh are easily known by a rude figure resembling a coat of mail.

The Kotá, Bándí, and Pratápgarh coins have a triple bow or knot, sometimes varied: the inscription of the latter rupee is in Nágarí.

The Saronj, Varínsáhi, Jhánsí, Gokul, Balágurh, and Gwáliár moneys have a cinque-foil or star of five triple-pointed leaves, placed, as most of such devices are, in the loop of the letter ج in جلوس in س.

The Ajmír, Oodhpúr, Sálinsáhi, old Chitor, Bhílárá, and Krishnagar coins; and, with some modification, those of Jaipúr and Matrá, have a جہاز, "sprig" or six-leaved branch.

Those of Madras, Arkáí, Chandor, Sháhápúr, have a small lotus or trefol.

The Jodhpúr, Kocháman, Bapúsáhi, and Pálí rupees have a kind of small sceptre following the *alif* of the word شاد, *sháh*.

The Indor rupee is well characterised by the solar effigy of the Suraj-ranai princes; the Maheswarí of Holkar by the symbol of Mahádeva; while the Srisáhi of Ajmír has the word श्री *srí* on the field.

The Jabalpúr rupee is distinguished by bearing the sun or year of reign in Nágarí characters. That of Ujjáin has merely four squares, or a kind of chequer.

The crescent and star are common emblems on many coins.

Of the Nepálese, Assamése, and other peculiar types, a better idea will be formed from the outlines in the accompanying plate: but the following memoranda<sup>1</sup> of the symbols on the pagodas of Southern India will be useful, as we have no specimens whence to delineate them:

<sup>1</sup> Extracted from a note of Mr. Wilson's 'Cabinet Specimens.'

## DEVICES ON COINS OF SOUTHERN INDIA.

Madras pagoda,	} The figure of Venkateswara, and Alamelu and Mangamā his two wives.
Polk Bander do.	
Venkatapatti do.	
Harpanahāli, Scott,	} A rude figure of Nrisinha, Lakshmi Nrisinhā, and on some also Prathāpa Krishna.
Portonovo, Sravanori,	
Sāhiburi, Jamsheri,	
Ikkeri, Centarkī, Maisūr, the figure of Ucak Maheswara.	
Haidari, Sultāni, Bangalore, etc.—the letter C.	
Dārghī, Chitaldrāg, the lotus. The Shālī pagoda ;—the trident.	
Tanjore, Gopāli, Gatti, the Kattār or dagger.	
Vinirāi, Panchakul, Gicoye ; a gun.	
Chakri, a Tripatī coin ; a diagram on one side and Tripundra on the other.	
Gulgi fanam ;—a plough.	

## TABLES OF BULLION IMPORTED, EXPORTED, AND MINTED.

As a matter of curiosity rather than with a view of furnishing data for calculating the numerical amount of the circulating medium of the provinces under the Bengal Presidency, a statement has been added in two tables<sup>1</sup> of the quantity of gold and silver bullion coined at the mints of Calcutta, Benāres, Farrukhābād, and Sāgar respectively, from the year 1800, to the 30th of April, 1833, inclusive; and also a statement of the imports and exports of bullion at Calcutta, extracted from Wilson's report on the commerce of the port, printed in 1828, the years since expired being added from the same official records. It will be remarked that of the whole bullion minted, a large proportion has been 'on account of Government.' This has chiefly consisted of the re-coining of worn-out rupees or the conversion of native coins, remitted from the different treasuries, into Government standard. The same process must be continually going forward, inversely, with the English coin in all the native states, so that it becomes impossible to estimate correctly the quantity in actual circulation.

The total value of the coinage at the four mints for the period of thirty-one years has been 53,322,600 rupees.

The bullion importation, viz Calcutta, from 1813-14	
to 1831-32 is valued at .....	sikkā Rs. 355,837,644
From which deducting the exports for the same period,	65,391,544
Leaves bullion disposed of in the country .....	sikkā Rs. 290,446,100

<sup>1</sup> [These are omitted as the totals and results are incorporated in the succeeding observations.]

The coinage of the several mints for the same term of eighteen years was as follows :

Calcutta mint.....	203,615,962	4	5
Benâres mint.....	88,329,359	0	6
Farrukhâbâd mint.....	47,252,842	9	11
Sâgar mint.....	4,324,775	9	9

Making altogether, fractions omitted..... 343,522,940

Being an excess of one-fifth above the import, or ..... Rs. 53,076,840

The coinage of the native mints may be jointly estimated at one-half of our own, which will give a rough total of 50 karors of rupees for 18 years, or three karors per annum for the coinage of the Bengal Presidency ; being 150,000 per diem for 200 working days.



TABLE of the Gold Coins of India.

Description.	Weight in grains.	Assay in car. grs.	Touch or pure gold in 100 parts.	Pure contents in grains.	Intrinsic value of 100.		Remarks.
					In Calcutta or Gold Mohra.	In Madras or Bombay gold rupees	
MUSK.							
Ahmad Shāh	207.00	W. 1 2½	85.1	176.27	93.937	105.374	[1750. Coined at Dihli.
Akbar	159.00	B. 2 0	100.0	159.00	84.732	96.301	ditto at Agra, 1560
Akbar, Jaljalali	186.60	B. 2 0	100.0	186.60	92.420	113.089	ditto at Lahor.
Assam	173.50	W. 5 0½	70.0	121.54	64.769	73.662	
" old	173.00	W. 3 3½	81.0	140.11	74.500	84.921	
Benāres	168.44	B. 1 1	96.9	163.17	86.506	98.896	
Batavian, 1783	242.00	W. 3 1½	77.9	188.90	100.665	114.479	Dutch K. I. Comp.
" 1796	243.60	W. 4 0	75.0	182.70	97.261	110.725	
"	244.25	W. 3 0	70.8	173.01	92.198	104.557	
Bombay, old	177.00	B. 0 3½	95.4	165.70	89.008	102.243	
" later	174.99	W. 2 0	83.3	145.82	77.709	89.877	
" new std. 1800	170.00	B. 0 0½	91.9	164.68	87.759	99.607	Legal exchange
" do. 1830	180.00	standard	81.7	165.00	87.929	100.000	value, 15 Bom. Rs.
Calcutta, old std.	190.804	B. 1 3½	99.3	189.40	100.504	114.780	Still coined here.
" new std.	204.710	standard	91.7	187.55	100.000	112.727	Legal value, 16 Rs.
Dihli	167.00	B. 1 2½	93.2	163.96	87.373	96.364	Date not given.
Haiderābād	172.18	B. 1 0½	96.1	163.45	88.171	100.203	
Jaipur	174.99	B. 0 3	93.7	164.03	87.428	99.398	Struck at Jaipur.
Lahore	166.00	B. 1 3½	90.2	164.70	87.771	99.829	Pure contents as in above coin.
Madras gold rupee	180.00	standard	91.7	165.00	87.929	100.000	Legal value, 10 Rs.
Pena mohr	150.35	B. 2 0	100.0	150.35	86.023	96.094	
Rāj	167.00	B. 0 3½	93.1	159.21	86.843	96.456	
another	121.05	W. 4 3½	74.1	86.48	46.087	52.325	
Shāh 'Alam, 1770	190.25	B. 1 2	98.2	186.80	99.947	113.212	From Kelly.
another	191.00	B. 1 2½	96.7	188.50	100.452	114.236	Current in Rājrat
Sonamula	178.36	W. 0 0½	91.1	162.47	86.682	98.465	(and Gujarat.)
Surat (average)	178.00	standard	91.7	163.17	87.507	99.307	
Shāh Jahān	168.00	B. 1 3½	99.6	167.80	89.315	101.873	Having signs of the rodina—rare.
PAGODA, RUPEE, OR VARANA.							
Anandāi	52.46	W. 4 3½	71.1	37.30	19.876	21.708	[still coined. Travancore Rājā.
Bangulor	52.87	W. 2 2½	81.0	42.82	22.818	25.552	Under Haider.
Bahāduri (Madras)	52.71	W. 1 2½	84.6	44.61	23.776	27.032	At Seringapatam, 1780
Dharwar	50.62	W. 3 3	76.0	38.32	20.473	23.280	In Karatic, scarce
Darbāri	50.53	W. 2 2½	81.0	40.96	21.830	24.827	Maichur.
Durg pagoda	51.55	W. 3 1	82.3	42.82	22.006	25.714	Coined at Chital-drug.
another	51.46	W. 4 0½	74.7	38.46	20.496	23.315	
Farrakhi (Canton)	52.90	W. 1 1½	85.7	45.35	24.353	27.486	Coined by Tipu.
Harpanahāli, old	50.76	W. 3 2½	76.8	39.60	20.782	23.583	Former Rājā.
" new	51.10	W. 3 0	79.2	40.45	21.558	24.520	Current at Bellary
Ikkeri, old	52.40	W. 2 1½	81.5	42.71	22.762	25.884	Coins of Maichur and
" new	52.80	W. 1 3	84.4	44.30	23.606	26.851	Badrur mints so called
Janthari	52.90	W. 1 3	84.4	43.87	23.580	26.589	Trichinopoly.
Madras	46.82	standard	91.7	42.01	22.287	25.464	Exchange at Ma-
" double	91.64	standard	91.7	84.06	44.764	50.927	dras, 3½ rupees.
" star, average	52.40	W. 2 2	81.2	42.55	22.780	25.507	
Muhammadshāhi old	50.52	W. 2 3½	79.4	40.14	21.588	24.527	{ Coined by Mah. 'Ali Khān, Na-
" new	45.30	W. 4 0	75.0	33.97	18.104	20.585	wab of Karnātik.

1 Seringapatam.

Denomination.	Weight in grains.	Assay in fine 999.	Doubt or pure gold in 100 parts.	Pure gold in grains.	Estimated value of 100.		Remarks.
					In Gold Mohurs.	In Madras or Bombay gold rupees.	
Naldé .....	52.92	W. 1 2	84.4	44.57	28.742	27.010	[Kāñ Chitor, By Patch Villa
Polatsā .....	52.50	W. 1 2 1/2	84.2	43.57	28.751	28.099	
Paliampattapagoda .....	51.00	W. 0 2	33.2	28.66	15.240	17.322	Near Trichinopoly
Porto Novo .....	52.21	W. 7 3	58.5	30.73	10.390	18.040	A Portuguese coin
Palkbunder .....	51.50	W. 1 2	85.4	43.99	22.442	28.053	Same as Madras.
Safaki, double .....	165.75	W. 1 2	85.4	90.55	48.130	54.748	
Sattāri .....	50.00	W. 3 3	75.0	38.02	20.252	24.042	Coined at Sattāra.
Shir Kāñai .....	49.50	W. 1 0	84.4	41.77	23.257	28.810	
Senti .....	52.23	W. 0 2	62.5	32.18	17.680	20.119	Same as Porto Novo
Sesavanar .....	50.16	W. 2 0 1/2	82.0	41.60	22.108	25.247	
another .....	51.50	W. 4 0	75.0	38.02	20.583	22.406	
Star (see Madras) .....							[Maliapur.
St. Thomé .....	75.33	B. 0 3	95.1	71.60	28.159	43.309	Double pagoda of
Sūhāri, 1 pagoda .....	50.20	W. 1 3	86.2	52.58	12.000	15.092	
Sultāni .....	52.10	W. 1 2	84.7	44.24	23.033	26.870	Coined by Tipū.
Travancore .....	51.00	W. 2 1/2	81.8	41.79	23.724	26.270	Assandri, somewhat
Venkātpati .....	51.47	W. 2 2	70.0	30.14	20.850	23.744	At Venkatagiri.
PANAM or PANAM							
Aparnai .....	2.68	W. 0 2	89.8	2.44	1.379	1.517	[their purity. So called from
Araluar .....	3.34	W. 11 2	13.7	2.58	1.344	1.415	Near Tanjore.
Chakri .....	3.51	W. 10 0	25.0	1.53	0.708	0.803	Tripali coin.
Chotāri .....	1.95	W. 8 0	58.5	2.41	1.819	2.058	Ikleri or Maider.
Gatā .....	3.38	W. 11 1 1/2	44.2	2.38	1.371	1.445	Tripali—Chitaval.
Gulgi .....	3.53	W. 10 1	48.9	2.15	1.403	1.656	Marked with a cross
Gopāli, old .....	5.15	W. 10 2	23.0	1.18	0.629	0.713	At Madhyargun,
new .....	5.16	W. 10 0	25.0	1.29	0.686	0.783	near Kudalur.
Kāñam, or Kāli .....	3.44	W. 12 2	35.4	1.92	1.090	1.166	Amendri Guane.
Panchkal .....	3.41	W. 10 2 1/2	40.6	2.65	1.410	1.603	Coimbatore.
Salem .....	4.60	W. 13 1 1/2	27.9	1.81	0.696	0.792	Coined at Salem.
Sali .....	5.15	W. 10 0	25.0	1.29	0.686	0.780	Taverdy.
Tanjore .....	3.40	W. 15 0	23.1	1.39	0.848	0.964	
Vicarāys .....	3.85	W. 10 2 1/2	40.6	2.72	1.452	1.651	Malabar.
Wudiar .....	5.44	W. 11 2	45.7	2.38	1.287	1.441	Ditto.
FOREIGN GOLD COINS.							
Not payable off 100 rupees in India 1900-1901, as of 100 per cent gold (see Table).							
Doublon Spanish .....	416.50	W. 0 2	89.0	273.11	108.834	220.125	3512.575
" 1786 to 1820 .....	417.00	W. 1 0 1/2	87.0	302.79	193.290	219.325	3220.145
" Chili, 1823 .....	417.00	W. 1 0	87.5	353.79	193.865	220.473	3229.791
" Colombia 1820 .....	417.00	W. 1 0	84.4	291.4	187.532	218.200	3194.040
" Peru .....	417.00	W. 1 0 1/2	87.0	302.0	193.280	219.325	3220.145
Ducat, Dutch .....	53.50	B. 1 2	98.2	52.3	27.996	31.844	400.413
Guinea, English .....	129.00	standard	91.7	118.70	62.258	71.943	1003.870
Sovereign, ditto .....	123.25	standard	91.7	113.10	60.271	68.544	1004.115
50 franc, French .....	99.57	W. 0 1 1/2	90.0	89.02	47.547	54.313	795.632
Johannese, Portug. .....	222.50	W. 0 0 1/2	91.4	293.38	168.281	123.258	1805.028
Moldavi, ditto .....	124.00	standard	91.7	113.67	60.373	68.883	1009.146
Sequin, Venetian .....	52.50	B. 1 3 1/2	99.7	52.27	27.853	31.073	464.031
Toman, Persian .....	73.00	B. 1 0 1/2	96.1	70.16	37.382	42.331	622.785
Copang, Japanold .....	275.00	W. 1 2	85.5	235.20	124.800	135.272	2079.268
" new .....	261.75	W. 0 0	60.7	134.50	71.676	81.555	1194.123

(To convert the decimals into lakhs and pā'is, see Table, page 12; for explanation of the present table, see page 35.)

## SUPPLEMENTARY TABLE OF GOLD COINS.

Since the Table of Gold Coins, page 43, went to press,<sup>1</sup> an opportunity has been afforded of adding largely to its contents, from the examination of a remittance of 725 old gold mohrs sent from the general treasury to be melted and re-coined. On a laborious scrutiny of them, many pieces of all the emperors of Dilli, since the time of Akbar, were discovered; and a few anterior to that monarch: besides a large store of Bhupál, Jaipúr, and Kotá or Bándi, mohrs, easily recognised by their respective symbols. The whole were weighed and assayed, and the results are given in the present supplement, arranged in two classes, the first, in the order of the emperors; and the second, alphabetically, in that of the localities. As there was considerable difficulty in recognising many of them, in which part of the name was wanting, it may be convenient here to accompany the table with a catalogue of the inscriptions most commonly met with on the gold coins of each monarch, from Akbar downwards. Some of them, as will be seen, have two or three different forms, which is very perplexing to the examiner. The term *Sáhib-kirán* 'lord of the *kirán*, or 'fortunate conjunction of the planets' was first applied to Taimúr; afterwards to Sháh Jahán, as *Sáhib-kirán Sáni* (the Second); and lastly to Muhammad Sháh.

It is worthy of remark, that most of the gold mohrs in the present table agree very nearly together in weight and value: and the average value of 100 may be taken as equal precisely to 100 Bombay and Madras new gold mohrs (or gold rupees as they are anomalously styled). The Calcutta gold muhr has no equivalent in the list: it would therefore be no innovation, but rather a restoration of the former system, which prevailed for three hundred years unremittedly, to abolish the Calcutta gold muhr of 204.71 grains, and adopt in its place the 180-grain muhr of Southern and Western India for the standard of the Bengal Presidency. Thus, were the *sikká* rupee abolished, there would remain but one gold and one silver coin throughout British India, both containing the same weight of precious metal, so that the relative value of gold and silver would be at once known; the present nominal rate of sixteen rupees<sup>2</sup> might still continue the legal equivalent of the muhr, since the value of gold is permanently risen nearly to that extent.

<sup>1</sup> [I have allowed this to stand as it appeared in the original, as it did not seem that any material object would be gained by an incorporation of the two Tables.]

<sup>2</sup> صاحب قران

<sup>2</sup> [The old muhr sells at 17.8, its legal rate being 16 rupees. The influx of Australian gold has of late considerably reduced the relative value of that metal in the bázars of India.]



## INSCRIPTIONS ON MUHRS OF THE MOGHUL EMPERORS.

## AKBAR.

Obverse :

جلال الدین محمد اکبر بادشاہ غازی

'The glory of the faith, Muhammad Akbar, the victorious emperor.'

Reverse : The Kalimah.

This inscription, though apparently so common, is not mentioned in Abū'l Fazl's list of the royal coins; the specimens vary in date from 972 to 985 A.H.

## JAHANGIR.

جهانگیر شاہ ابن اکبر بادشاہ ضرب برہانپور امان اللہ

'Jahāngir Shāh, son of Akbar Bādshāh. Struck at Burhānpūr, May God preserve him.'

## SHAH JAHAN.

(a) A plain disc—

Obverse : the Kalimah.

لا الہ الا اللہ محمد الرسول اللہ ضرب برہانپور سنہ الہی ۸۲

'There is no God but God, etc. Struck at Burhānpūr in 1121 year 82.'

Reverse :

شہاب الدین محمد شامجہان غازی صاحبقران ثانی

'The bright star of the faith, Muhammad Shāh Jahān, Ghāzi Shāhib-*Qirān* the second.'

(b) The *chabāryārī* mahr—

Obverse : A square centre, containing the Kalimah; around which are the names of the four companions of the prophet, Abubakr, 'Umar, 'Usmān, and 'Alī.

لا الہ الا اللہ محمد الرسول اللہ ابوبکر عمر عثمان علی

Reverse : Same as before : 'San jalūs v.'

(c)

Obverse : A lozenge shield, containing the Kalimah, around which, 'Zarb Allahābād, *sun* 1031.'

Reverse : As in the other specimens.

## AURANGZIB.

Obverse :

در جہان سکہ زد چوں مہر منیر شاہ اورنگزیب عالمگیر

'Shāh Aurangzib 'Ālamgīr issued coin, brilliant as the sun.'

غازی is more properly 'a warrior of the faith,' and in this sense we must understand its application on these coins.]

Reverse :

سرب مستقر الخلفاء اکبر آباد سنہ جلوس میمنت مانوس

'Minted at the seat of the Khilāfat, Akbarābād, the year of the reign of fortunate associations.'

BAHĀDUR SHĀH.

Obverse :

سکه مبارک شاه عالم بهادر بادشاه غازی سنہ ۱۱۲۳

'Auspicious coin of Shāh 'Alam Bahādur, Bahāshāh Ghāzi. A.H. 1123.'

Reverse :

سرب خجسته بنیاد سنہ جلوس

'Struck in the favored city, year of the reign &c.'

JAHĀNDĀR SHĀH.

Obverse :

سکه زد بر سیم و زر چون مهر و ماه  
ابوالفتح جهاندار شاه غازی بادشاه ۱۱۲۴

'The father of victory, the Emperor, Jahāndār Shāh Ghāzi, struck coin in silver and gold, resembling the sun and moon. A.H. 1124.'

Reverse : As in Aurangzib's coins.

FARRUKHSHĀH.

Obverse :

سکه زد از فضل حق بر سیم و زر فرخ سیر بادشاه مهر و بر

'By the grace of God, the monarch of sea and land, Farrukhshāh, struck silver and gold coin.'

Reverse :

سنہ ۶ جلوس میمنت مانوس سرب دارالخلفاء شاه جهان آباد

'The sixth year of his prosperous reign. Minted at the seat of the Khilāfat, Shāh Jahānābād (Dihli).

MUHAMMAD SHĀH.

(a)

Obverse :

سکه مبارک محمد شاه بهادر بادشاه غازی سنہ ۱۷

'Auspicious coin of Muhammad Shāh, the victorious emperor, 17th year.'

Reverse : As usual; sans 2 to 17.

(b)

The same inscription with the addition of صاحب قران ثانی chiefly of the year 12; a debased coin.

\* [ This legend is ordinarily peculiar to Ahmad Shāh.]

(c)

Obverse :

سکه زد بر سیم و زر چون مهر و ماه  
ابوالفتح غازی الدین محمدشاه

'The father of victory, defender of the Faith, Muhammad Shah, struck silver and gold coin resembling the sun and moon.'

Reverse : As in (a) ; and of various years.

ANNA SHAH.

Obverse : Same as the coin of Farrakhshir, with exception of name :

سکه زد بر سیم و زر از فضل حق احمد شاه سنه ۱۱۱۱

Reverse : As usual.

'ĀLAMSHIR II.

There are also three varieties of inscriptions on his coins (the reverse of all being as usual).

(a)

Obverse :

سکه مبارکت بادشاه غازی عالمگیر ثانی

'Fortunate coin of Bādshāh Ghāzi 'Ālamgir the second.'

(b)

Obverse :

ابوالعدل عزیز الدین شاه عالمگیر بادشاه غازی خلد الله ملکه  
سنه ۳

'The father of justice, chosen of the faith, Shah 'Ālamgir II. Bādshāh Ghāzi. (May God perpetuate his kingdom!)' Sans 2 and 3.

(c)

Obverse :

سکه زد بر هفت کشور تابان همچون مهر و ماه  
عزیز الدین عالمگیر ثانی بادشاه

'Chosen of the faith, 'Ālamgir the second, struck coin in the seven climes, shining like the sun and moon.' a.n. 1170 to 1173, Sans 3 and 6.

SHAH 'ĀLAM.

Obverse :

سکه زد بر هفت کشور سایه فضل الله

Reverse :

حامی دین محمد شاه عالم بادشاه

The same as on the Company's coin, explained at page 2. All later than the 19th san, bear the symbol of a royal umbrella.

<sup>1</sup> [I distrust this reading, but not having the original coin to refer to, I do not venture to amend the attribution.—E. T.]

[I cannot well afford the space requisite to complete the list of the coinage of the Moghul Emperors of Hindústán; but I venture to insert the legend of perhaps the most interesting coin in the whole series; together with two novelties, hitherto, I believe, unpublished.

I. Silver coin of Núr Jahán Bígám. Struck by order of Jahángír, A.H. 1034.<sup>1</sup>

Obverse:

زنام نور جهان بادشاه بیگم زر سنه جلوس ۲۰

Reverse:

بحکم جهانگیر شاه یافت صد زیور ضرب لاهور ۱۰۳۴

A second coin in the British Museum of the same date is seen to have been minted at Ahmadábád.

II. Silver. Murád Baksh. Three coins in the British Museum. No date.

Obverse: Square area—The Kalimah.

Margin—The names of the Four Companions of the Prophet.

Reverse: Square area,

محمد مرآد بخش بادشاه غازی

Margin:

ابوالمظفر تاج الدین ضرب سورت

III. Silver. Raff'ud-darjât. Five coins in the British Museum. A.H. 1131.

Obverse:

سکه زن با هزاران برکات شاهینشه بحر و بر رفیع الدرجات ۱۱۳۱

Reverse:

ضرب سنه احد جلوس میمنت مانوس

Other specimens bear the names of Lâhor with *مستقر الخلافة*; and Dihilí under the style of *شاه جهاناباد* —E.T.]

<sup>1</sup> [Marsden, p. 635; Anquetil du Perron, p. 221;—Lâhor, A.H. 1035.]

## Supplementary Table of Indian Gold Coins.

(The letters (a), (b), and (c) refer to the descriptions in pages 46 to 48.)

Designation.	Weight in grains.	Assay in car. etc.	Purity of pure gold in 100 parts.	Fines (weight in grains).	Intrinsic value of the.		Remarks.
					In Pak. gold mints.	In Ind. or Eng. gold m.	
Jahān-shāh .....	163.80	B. 0 2½	94.5	161.84	82.516	93.848	A. n. 1298.
'Alauddīn .....	160.50	B. 0 2½	94.2	155.96	80.642	92.128	Abū'l-Muaffar.
Taimūr Shāh .....	167.40	B. 0 3½	95.1	160.12	84.795	96.435	A. n. 1350, Dillī.
Akbar, average .....	162.44	B. 2 0	100.0	162.44	85.265	98.448	A. n. 1556, Dillī.
single .....	165.60	B. 1 1½	97.4	161.29	85.951	97.750	Injured by solder of ring.
Jahāngīr .....	166.30	B. 2 0	100.0	166.30	83.942	101.152	At Barchānpūr.
Shāh Jahān (a) .....	168.65	B. 1 1½	97.4	164.36	87.534	99.550	Plain field.
(b) chakrā-yuk .....	168.20	B. 1 2½	95.8	167.76	89.402	101.074	Square shield.
(c) .....	168.40	standard.	91.7	164.37	82.303	93.051	Violated by solder.
(c) average shield .....	165.08	B. 1 2½	99.4	165.15	88.008	100.090	Struck at Allahābād.
Pitāra .....	170.70	B. 1 3¼	99.7	160.37	80.256	102.647	Supposed from symbol 29.
doubtful * .....	164.70	W. 2 2	91.3	153.82	71.312	81.102	Probably forged.
Aurangzib, plain .....	168.68	B. 2 0	100.0	168.68	89.500	102.250	Several.
nos 6 to 31 .....	168.20	B. 1 2	98.0	164.78	87.813	99.807	Dillī, A. n. 1676.
Agra .....	162.00	B. 2 0	100.0	162.00	80.320	98.182	1100, these vary
Etawa .....	168.50	B. 2 0	100.0	168.50	89.444	101.930	only in the place
Dillī .....	167.65	B. 2 0	100.0	167.65	89.371	101.606	of coinage.
Lāhor .....	167.60	B. 0 2½	94.5	158.43	84.480	90.021	
Serat .....	170.70	B. 2 0	100.0	170.70	90.700	103.162	
nos 29 * .....	164.00	W. 2 3½	79.7	130.09	69.644	79.204	No place of coinage, others Dillī. A. n. 1697, Lāhor?
Aurangzib .....	164.67	B. 2 0	...	164.67	87.756	99.863	
Khajistāh .....	165.60	B. 1 0	...	158.70	84.872	96.182	
Multān .....	168.45	B. 1 3¼	...	167.23	89.119	101.543	
Bahadur Shāh .....	168.35	B. 1 1½	97.4	163.53	82.146	99.168	Shāh 'Alam i.; struck at 'Khajistāh Ismā'īl' (Dillī), in 1125.
Jahānshāh .....	167.25	B. 2 0	100.0	167.25	89.126	101.364	Struck at Jaspūr, 1124.
Farrukhsīr, nos 6 .....	167.33	B. 1 0½	96.4	161.33	85.922	97.717	Dillī, A. n. 1125.
Lāhor .....	168.00	B. 1 0½	96.4	161.87	86.263	98.106	
Mulām, Shāh (c) .....	167.12	B. 1 1	96.0	161.90	86.278	98.122	Struck at Dillī.
(b) nos 2 to 17 .....	168.07	B. 1 1	97.4	163.09	87.235	99.200	(Average.)
Agra .....	164.79	B. 1 3	99.0	163.07	86.900	98.830	
Allahābād .....	166.70	B. 1 3½	99.2	163.40	88.141	100.241	
(c) Arkāt .....	166.30	B. 1 6½	98.4	160.24	85.391	97.112	San i.
Banāras .....	167.30	B. 2 0	100.0	167.30	89.155	101.394	San 20. See p. 21.
Islāmābād .....	168.30	B. 1 3½	99.2	166.58	88.987	101.203	Direct at Dillī.
Ujjāin .....	166.90	B. 1 2½	98.5	164.29	87.091	99.571	
Etawa .....	167.00	B. 1 3½	99.6	167.46	89.241	101.493	
(c) nos 12 .....	164.70	W. 1 0	87.5	161.12	78.800	87.344	Ill-executed, Dillī. H <sup>1</sup> marked 

The coins marked thus \* appear to be forgeries; there are twenty-seven of them bearing the superscription of Aurangzib, badly executed, and one having that of Farrukhsīr, and the date A. n. 1150, with the same San 5116 29, although the latter emperor only reigned six years.

<sup>1</sup> This debased metal is very popular—H<sup>1</sup> was probably coined under Mughal influence—there were eighty-three of the sort, all of the same date.

Description.	Weight in grains.	Assay in 1000 parts.	Thous. of pure gold in 100 parts.	Pure substance in grains.	Intrinsic value of Rs.		Remarks.
					In Cal. gold mints.	In Met. or Euro. gold m.	
Ahmad Shah .....	167.65	B. 1 3	98.8	163.90	88.410	100.547	
Barhampur .....	169.50	B. 2 0	100.0	169.50	90.487	102.909	
'Alamgir II. san 1	167.30	B. 1 3½	99.2	165.99	88.456	100.602	Struck at Delhi (s).
san 3 .....	167.78	B. 1 3	99.0	166.03	88.478	100.624	Inscription (s).
A. H. 1170-1173 .....	167.50	B. 1 2½	98.4	164.88	87.807	99.929	Inscription (s).
var. sans .....	168.00	B. 1 3	99.0	166.25	88.693	100.767	Struck at Sitwal.
Shah 'Alam, Delhi	167.41	B. 1 1½	97.4	163.03	86.890	98.618	Present inscription. See page 2.
sans 3 to 15½	166.31	B. 2 0	100.0	166.31	90.782	98.690	With the obverse.
Barhampur .....	169.50	B. 1 2½	99.5	165.02	89.857	102.192	Same as old Rom.
Farrukhabad .....	165.75	standard.	91.7	151.94	80.505	92.084	Average of 10.
Lucknow .....	169.80	B. 1 3½	99.2	164.07	87.435	99.428	Under the Nawab.
Surat, san 19 .....	170.15	B. 1 3½	99.8	169.71	90.438	102.853	Same as old Rom.
Akbar II. ....	166.60	B. 2 0	100.0	166.60	88.792	100.970	With dagger.
<i>Local Gold Coins.</i>							
Agra .....	164.75	B. 1 3	99.0	162.07	86.960	98.820	Muhammadshahi.
Allahabad 1 .....	162.00	W. 10 0	30.0	31.00	48.165	49.091	Debasad? false.
Arkat, M.S. san 1 .....	166.30	B. 1 0½	96.4	160.24	85.891	97.112	Muhammadshahi.
Benares, san 20 .....	167.20	B. 2 0	100.0	167.20	89.155	101.204	"
Bhopal, san 27 .....	167.60	B. 1 0½	95.4	164.01	87.402	99.400	Average of 149.
Barhampur .....	169.50	B. 1 3½	99.2	168.62	89.687	102.192	Same as old Rom.
Etawa .....	167.90	B. 1 3½	99.8	167.16	89.241	101.492	Muhammad Shah and Farrukh.
Farrukhabad .....	165.75	standard.	91.7	151.94	80.505	92.084	Company's new standard.
Idharabad, Dacca? .....	168.30	B. 1 2½	98.2	165.98	88.507	101.203	Muhammadshahi.
Jaipur, san 8 .....	166.60	W. 2 0	100.0	166.60	78.982	84.141	Fake money.
san 22 .....	168.11	B. 2 0	100.0	168.11	89.389	101.888	These are averages
san 23 .....	167.04	B. 2 0	100.0	167.04	89.389	101.784	of many, all
san 24 .....	168.12	B. 2 0	100.0	168.12	89.580	101.889	new coins of the
var. sans .....	167.80	B. 2 0	100.0	167.80	89.421	101.607	Jaipur mint.
Sitwal, san 18 .....	169.10	B. 1 3½	99.2	166.70	89.881	101.983	Has the same symbol.
Kota, sans 1 to 10 .....	167.05	B. 1 0	95.8	160.12	85.529	97.943	Known by the
San 10 .....	166.72	B. 1 2½	99.2	163.68	87.225	99.100	Kota and Ban-
Lucknow, old .....	165.80	B. 1 3½	99.2	164.07	87.435	99.428	di symbol.
new .....	165.85	B. 1 3½	98.5	163.07	86.698	98.528	Machlisahi.
Ujjain, san 2 .....	166.90	B. 1 2½	98.5	164.29	87.551	99.071	Shirahi.
Patna, Shahjahan .....	170.70	B. 1 2½	99.2	169.37	90.256	102.647	Muhammadshahi.
Sagar? marked  .....	164.70	B. 0 6½	92.2	141.83	60.912	92.019	(From symbol 39, p. 57.)
Sagar, Srirangpur? .....	166.25	B. 1 2	98.0	162.79	86.740	98.659	This monogram is unknown.
Surat, san 19 .....	170.15	B. 1 3½	99.8	169.71	90.438	102.853	With the trisul.
Peshawar .....	164.00	W. 8 1½	56.7	59.10	49.615	56.424	Old Bombay.
							Khorshid Shah.

(For explanation of the several columns of this table see page 50; and for converting decimals into *anna* and *paisa*, see the Table at page 12.)

<sup>1</sup> The inscription on this coin, of which there are three specimens, is very badly executed; the letters are most probably forged.

Table of the Silver Coins of India.

(To find the value in sikkā rupees, deduct one-sixteenth from the value in Farrukhābād rupees: the latter are the same as Madras and Bombay rupees. For the value in £ sterling, divide by 12.)

Name.	Weight.	Assay.	Tenck.	True contents.	Intrinsic value of 100.	Remarks.
	Grains.	Ozins.		Grains.	Pa. Rs.	
Agra rupee .....	171.02	Br. 7	94.5	162.32	98.381	Struck at Agra by ?
Ahmadābād old ..	178.00	Wd. 4.5	85.8	155.83	96.864	Gujarāt and Cutch.
old ..	179.92	Wd. 17.5	84.8	151.81	92.004	Formerly coined.
new ..	180.15	Wd. 15	85.4	154.29	93.568	Present currency.
hāh ..	174.77	Br. 12	96.7	168.94	102.200	Coined for city currency.
Ahmad Shāh .....	177.35	Br. 10	98.0	172.70	105.272	(Equal to Dihli standard, 1750.)
Ahmadnagar, old ..	174.50	Br. 14.5	97.7	170.57	103.376	Same as Dihli rupee.
Ajmer, old ..	165.00	Wd. 11	87.1	146.52	88.952	Sei sikkā, ems. currency introduced by Tūtia.
Sei sikkā ..	168.17	Wd. 27.5	86.2	154.89	81.751	or Bāpūshikā ?
32nd sun ..	168.00	Wd. 21	82.9	139.30	84.428	Coined in 1792.
Alīshāhād .....	172.03	Stand.	91.7	157.70	95.573	Same 18, 21, and 26, (1778-80).
Atamgir II. 1759 ..	179.50	Br. 16	98.5	176.31	100.074	Equal to the Sā. rup.
Anāsāhī .....	170.25	Wd. 7.5	88.5	156.05	94.578	Coined at Kaira, Gujarāt.
new ..	177.36	Wd. 14.5	85.6	151.77	91.982	Coined at Pīlād, do.
Ankush, old .....	172.00	Br. 5.0	93.1	160.17	97.075	Standard of Pāna.
new ..	178.50	Br. 2.5	92.7	160.95	97.484	also called Chīn-sauri.
Arum, (Mug.) ..	162.32	Wd. 81.5	37.7	92.71	56.795	
Arkat, (Company's) ..	179.46	Br. 7.5	94.8	167.20	101.340	Coined in Calcutta
1759 ..	177.35	Br. 10	95.8	169.80	102.948	for the Dacca and
1792 ..	174.00	Br. 11	90.2	167.47	101.500	Katak districts,
1788 ..	177.35	Br. 11	96.2	170.00	103.396	also the old currency of Madras.
old ..	172.39	Br. 4.5	93.8	161.25	97.729	The Sūrat Arcot,
1766 ..	171.47	Br. 3.5	92.1	159.58	96.773	mentioned in Reg. XXXV. 1793.
new ..	188.00	Wd. 4.0	89.3	169.20	102.545	The Madras Ad. ru.
Katak ..	173.89	Br. 0.0	95.4	165.92	100.556	Formerly cur. here.
French ..	173.13	Br. 9.5	93.6	165.55	100.324	Coined at Pondicherry.
Garnāh ..	172.90	Br. 7	94.6	162.88	98.718	Uncertain (from Chitragong).
Phursī ..	172.78	Br. 7.5	94.8	163.78	99.238	'Farsī' of Reg. XXXV. 1793.
uncertain ..	160.33	Wd. 17.5	80.2	142.88	86.592	Probably forged.
Jahāzī ..	173.673	Br. 7.5	94.8	164.52	99.716	Brought to Chitragong by sea.
Assam, mixed ..	174.05	Br. 8	93.0	165.35	100.215	Current in the valley
Rudra Singh ..	173.26	Br. 15	94.0	169.59	102.792	of Assam and the
Siva ..	173.40	Br. 13	97.1	165.24	102.025	neighbouring districts.
Pramatta ..	169.00	Br. 12	96.7	164.34	99.537	Coined at Rangpūr and Jorhat.
Rājendra ..	173.90	Br. 12.5	96.3	168.47	102.100	
Lakshmi ..	173.50	Br. 13	97.1	165.44	102.084	
Gourināsh ..	174.20	Br. 10	95.8	165.94	101.177	Restored to throne in 1793.
new ..	174.00	Br. 6	94.1	163.83	99.205	
Bhūrat ..	174.75	Br. 11.5	96.5	168.06	102.159	
Ashāsāhī ..	176.50	Wd. 11	87.1	153.70	93.153	Anāsāhī? Gujarāt, Beroda, Kaira, etc.



Name.	Weight.	Assay.	Fine- silver.	Fine- copper.	Intrinsic value of 100.	Remarks.
Anangshahi.....	Grains. 170.86	Peta. Wt. 23.5	81.9	139.89	Rs. 84.787	Coined by Govind Bakshi, (Haidar- shahi), see Govind Bakshi.
Babshahi.....	177.00	Wt. 14.5	85.0	151.56	91.840	Coined at Bayoda, from 1804 to 18.
Bugalkota.....	172.30	Wt. 8	89.0	184.35	98.516	Mulharshahi (Ho- kar).
Balsahi.....	160.21	Wt. 8.5	88.1	149.13	90.426	Old coinage of Sagar.
	162.14	Wt. 8.5	88.4	144.92	87.828	current in Gurrak and Bundelkhand.
	160.00	Wt. 8	89.2	150.89	91.328	Cur. in Rohilkhand.
Bareilly.....	171.90	Br. 4.5	93.5	160.80	97.433	Average of 4 lakhs.
	169.28	Br. 5.0	93.7	158.61	95.946	New disappearing.
Bareilly, old.....	177.06	Br. 7.5	94.7	167.84	101.720	Present currency (1821).
new.....	177.50	Wt. 8.5	88.1	156.42	94.801	See Babshahi.
Baroda.....						Coined by the Dutch
Batavia, 1763.....	199.00	Wt. 20.5	83.1	165.41	100.251	East India Comp.
1803.....	204.00	Wt. 20.5	79.0	161.07	97.621	Near Ahmadnagar.
Bhatar.....	171.30	Wt. 10.0	87.5	149.59	90.841	Current at Puna, in Cooran, etc.
Bilapoor.....	171.82	Wt. 14.5	86.0	147.12	89.163	Under native usage.
Bemares, old.....	175.00	Br. 13	98.7	189.17	102.328	By Reg. 11. 1812,
old stand.....	175.00	Br. 13.0	98.5	188.673	102.348	oblique mintage.
since 1800.....	174.76	Br. 9.5	95.0	167.00	101.285	Average of rupees brought for re- coinage.
1819-1820.....	180.234	standard	91.7	165.21	100.134	The late Farrukhi- bad rupee mint abolished in 1830.
Bhikanir.....	174.00	Br. 11	90.2	167.47	101.506	Current in Ajmer.
Bhilera.....	168.00	Wt. 21.5	82.7	159.50	84.063	Mint under Bhopali Nawab.
Bhilera, old.....	160.62	Wt. 12.5	88.5	146.65	89.582	Reformed in 1827.
another.....	160.01	Wt. 16.5	84.5	143.21	85.901	Coined at Bhopali.
new.....	173.61	Br. 6.5	94.4	162.47	99.299	(Reformed in 1827, see 'Bhilera'.)
Bhopal.....	171.28	Wt. 6	88.2	162.82	92.616	Average of many lakhs.
another.....	169.25	Wt. 6.5	89.0	158.56	91.349	Old Surat rupee.
Bharipur.....	171.86	Br. 10	90.8	164.70	99.219	Ditto debased.
Bhindran.....	156.07	Wt. 19.5	83.5	150.89	79.335	Coined at Bombay and at Calcutta.
Bombay, old.....	178.33	Br. 13	98.7	172.39	104.282	Present standard.
	178.76	Wt. 2.5	90.7	161.99	98.176	Current in Ajmer and Bundelkhand.
1800.....	179.00	Br. 6.5	92.0	164.68	99.200	Brazilian dollar.
1829.....	180.00	standard	91.7	165.00	100.000	
Bondi, 1819.....	171.56	Wt. 7	88.8	152.26	92.273	
1825.....	172.82	Br. 7	94.6	163.46	98.622	
Brazil, Patoka.....	407.99	Wt. 5	88.6	265.43	221.514	
Brodara, old.....	178.50	Wt. 1.5	91.1	162.51	98.498	
new.....	178.50	Wt. 7	88.8	158.42	96.911	
Babshahi.....	175.56	Wt. 15	85.4	149.957	90.880	Coined at Baroda.
Bunder, tukshi.....	163.79	Br. 85	93.2	165.92	94.502	
Garnali.....	174.66	Br. 9	95.4	166.66	101.000	
Barhampur.....	178.80	Br. 8.5	93.2	170.25	103.171	Also called 'Parki,' coined by Sindia in Khandesh.
Basra.....	250.00	Wt. 11.7	42.0	120.17	72.828	Persian Gulf.
Calcutta, old.....	179.600	Br. 15	98.0	175.023	106.620	The old Murshida- bad 19th ann sik- ka rupee.

Name.	Weight.	Assay.	Purity.	Fine Contents.	Estimated value of 100.	Remarks.
Calcutta, now present ..	Olden. 101.916 102.00	dwts. Stand. Stand.	91.7 91.7	Olden. 175.923 176.00	Pa. Rs. 100.679 100.666	By Reg. XIV. 1818. <sup>1</sup> By Reg. VII. 1833, all receivable at par.
Cambay .....	178.00	Wt. 16	85.4	162.04	92.167	Current in Nawab's district.
Calcutta .....	172.69	Wt. 24	81.7	141.01	85.440	
Ceylon .....	134.90	Wt. 24	81.7	109.45	66.225	The ru-dollor of 1c. ad. 7
Chambagond .....	138.82 171.00	Wt. 5 Wt. 16	89.6 85.4	123.91 140.00	73.874 87.317	Discount of 2 per cent. with Anka's rupee. Current in Nagpur and the Narbadda
Chanda .....	166.42	Wt. 12	86.3	143.54	86.991	
1819-24 ..	169.70	Wt. 4	90.0	161.78	92.563	
1826 ..	166.15	Wt. 16.5	84.8	152.72	92.559	
Chandori .....	173.00	Br. 1.5	92.2	169.00	90.706	One of Shadia's mints Gwalior rupee.
Chandoli .....	170.15	Wt. 14.5	85.6	143.60	89.299	
Chandori .....	172.00	Br. 1	92.1	158.58	93.989	Khandesh standard, current in N. Con- can, at par with Anka's rupee.
another ..	168.70	Wt. 2.5	90.7	152.68	92.606	
another ..	160.70	Wt. 1	91.8	154.85	93.840	
Chandrapur .....	163.00	Wt. 19	89.8	136.51	82.736	Average.
Chinsari .....	166.50	Wt. 8	89.0	149.10	90.297	
Chinsari .....	172.50	Br. 2	92.9	169.28	97.140	Same as Anka's of Pena.
Chitor .....	169.57	Wt. 24.5	79.8	133.51	82.004	Current in Ajmer.
Chaurasi .....	171.75	Wt. 3.0	90.5	154.94	93.993	Ikkeri.
Chaurasi .....	166.65	Wt. 13	86.3	142.18	86.171	Same as Chanda ?
Chandauli, san 20.	171.10	Wt. 9.5	93.6	169.57	95.497	Coined by Zabita-kuhan in Bichalkhand.
Chulani .....	160.71	Wt. 27	80.4	129.23	78.324	Baidarabad.
Subul .....	169.47	Wt. 28.5	79.8	135.22	81.954	
Chappi .....	172.50	Br. 6	94.1	162.44	98.447	
Katak .....	172.18	Br. 6.5	94.3	162.33	98.380	Arka's rupee coined at Calcutta.
Chilpi .....	169.97	Wt. 17.5	85.9	146.88	89.021	Bundelkhand.
Chitropur .....	169.00	Wt. 8.5	88.1	148.98	90.261	Raja Pratap Singh, Bundelkhand.
Dacca .....	170.30	Br. 12	96.7	173.32	103.944	Same as the sikka rupee.
Deig .....	169.70	Wt. 7.5	88.5	150.25	91.064	Near Bhartpur.
Dilli .....	172.49	Br. 19	97.1	167.37	101.437	See Sankat, and the various aubaks <sup>2</sup>
Muhammad Shah. 28th san	173.30 172.80	Br. 12.0 Br. 3	96.9 92.9	167.68 169.56	101.806 97.309	
173.00	Br. 6.5	94.4	163.27	98.951		
Dollar, <sup>3</sup> Spanish ...	417.69 413.08 414.00	Wt. 4.0 Wt. 4.5 Wt. 4	89.7 89.8 89.6	374.87 374.27 373.21	377.194 226.830 226.584	Since 1772, by law. Average in England Since 1812, average of Calcutta assays.
N. American	416.00	Wt. 6	89.2	371.35	225.000	By United States law
Dutch guilden	161.00	Wt. 1.5	91.1	144.55	87.508	By law, 162 grs.
English shilling	87.25	Br. 2	92.5	89.79	48.909	(Previous to 1830 nearly 3 dwts. Br.)
crowns	436.96	Br. 2	92.5	403.63	244.624	
Etowa	171.80	Br. 1.5	92.3	158.56	96.056	In the Dutch.
French 5-franc	385.85	Wt. 4	90.0	347.36	214.860	By French law.
	394.30	Wt. 4.5	89.8	345.25	209.242	By Calcutta assays.

<sup>1</sup> The standard of 1818-1820 was really a pennyweight too fine, in consequence of an error in the old standard plate of England, to which the assays of India were referred. The proper correction has now been introduced in both countries; and it has been in the assays in this table made prior to 1830.

<sup>2</sup> The dollars of the independent states of Mexico, Bolivia, Chili, and Peru, are of the same weight and value as the Spanish dollar; they varied during the revolutionary period.

Name.	Weight.	Assay.	Fine- ness.	Pure contents.	Intrinsic value of 300.	Remarks.
Path 'Ali shâhi .....	Grain.	Peta.		Grain.	Pd. Rs.	
157.71	Dr. 7	94.8	149.17	90.400	Late king of Persia,	
another ...	Dr. 9.5	95.6	137.12	83.100	died in 1833.	
A. M. 1244	Dr. 4.5	93.5	98.63	59.810	Struck at Hamadân.	
1245-48 ...	standard	91.7	96.36	58.400	Struck at Shiraz.	
Farrahâbâd 39 am	Dr. 6	94.1	159.23	97.073	Old native currency,	
					average.	
Company's .....	173.00	Re. 9.2	95.5	165.215	100.144	45th am Lucknow Re.
now standard ...	186.234	standard	91.7	165.215	100.144	of Reg. XIV. 1803
present .....	186.00	standard	91.7	163.00	100.000	By Reg. XI. 1819.
Generally .....	167.20	W. 8	88.3	147.89	89.511	By Reg. VII. 1833.
German crown .....	433.00	W. 20	83.2	360.84	218.091	Ghazâlî Arkât.
	430.45	W. 20.5	83.1	357.81	216.853	Legal value by con-
Obafian rupee .....	173.31	Dr. 9	93.4	165.57	100.222	vention of 1793.
Gen .....	168.50	W. 12	86.4	145.88	88.230	By Calcutta assay.
Gahureâhi .....						29th am Reg. III 1806
1 to 16 am ...	174.43	Dr. 11.8	90.6	168.25	101.971	Imported at Bombay
chaureâhi .....						as bullion.
thamkâ .....	174.18	Dr. 7	94.3	164.74	99.853	Shâh 'Alam? Denares
						mint; <i>Alamâ</i> , broad
16th am .....	174.52	Dr. 8.5	93.2	166.16	100.792	<i>Alamâ</i> , stump or
trishâ .....	173.05	Dr. 4.5	93.5	161.87	98.110	broad; all current
Gokul rupee .....	172.80	Dr. 3	92.9	160.56	97.369	in Ghazâlî dis-
Gomansâhi, 1819 ...	171.23	standard	91.7	156.98	95.120	trict at par with
1825 ...	172.98	Dr. 5	93.7	162.17	98.283	Denares rupees.
						See Boudi.
Gopâl shâhi .....	172.50	Dr. 3	93.9	160.28	97.140	Equivalent to the In-
Gurumatkal, 1 ...	172.00	W. 24.5	81.2	140.55	85.003	door standard.
						Madras
2 ...	172.00	W. 18.5	81.0	144.41	87.020	Haidarâbâd Bâgh
3 ...	170.00	W. 19.5	79.2	127.83	77.487	chalanî.
Govind bakhshî, 1 ...	170.80	W. 20	82.8	142.33	86.262	" Shahr chalanî.
						" Bâgh chalanî.
2 ...	171.50	W. 20	81.2	139.3	84.451	Aurangâbâd Bâgh
3 ...	170.50	W. 19	82.7	143.79	85.642	chalanî.
1832 ...	169.39	W. 25	81.2	137.62	85.406	Do. Khahr chalanî.
						Do. Bâgh chalanî.
Gwâlâr .....	171.00	Dr. 6	94.1	161.31	97.763	See Shamsîrî, paid
						to troops at 120 per
Gurâkshâ .....						100 Pd. or By. Rs.
Hâli .....						The best of Sindia's
Hatras .....	171.60	Dr. 8	93.4	163.73	99.27	coins.
Holkar shâhi .....	168.60	W. 1	91.3	153.84	93.240	Delamâ Bâlasâhi.
						See Puna, Ujjain, etc.
Hukari .....	172.60	W. 22.5	82.2	152.03	86.982	Coined by Holkar at
Hurda .....	172.39	standard	91.7	158.20	95.881	Indus?
Haidarâbâd, 1 ...	174.10	W. 17	84.6	147.05	89.196	Coined at Marath.
						Called Hâli, in Mâhwa
2 ...	173.50	W. 17	84.6	146.75	88.942	Bâgh chalanî, 'palace
3 ...	170.50	W. 18.5	81.0	143.13	86.757	currency.
						Shahr chalanî, 'city
1823 ...	173.38	W. 18	84.2	145.92	88.440	currency,' see p. 25.
1832 ...	172.66	W. 21	82.9	143.16	86.760	Bâgh chalanî, 'or-
	170.20	W. 35	77.0	131.19	79.511	dered currency.'
						Coined at Calcutta.
						Bâgh chalanî.
						Shahr chalanî

<sup>1</sup> Average of one thousand six hundred and eighty, coined in 1823. The Persian coins are struck in many different towns, the principal mint being at Shiraz.

Name.	Weight	Assay.	Touch.	Pure contents.	Intrinsic value of 100.	Remarks.
	<i>Grains.</i>	<i>parts.</i>		<i>grains.</i>	<i>Rs. Pcs.</i>	
Imāmi .....	170.24	Br. 10.5	96.0	168.31	102.003	Struck by Tipu Sultan, rare.
Indor, 1819 .....	172.00	Br. 7.5	94.5	163.04	98.813	Proper weight 174.5, current throughout Malwa at par with English rap.
1832 .....	172.96	Br. 6	94.1	162.81	98.674	See Shikharhi.
Jalāon .....	168.86	Wt. 12	86.6	145.28	96.002	Raja Pratāp Singh of Srīnagar, established 1809, abolished in 1820.
Jhāsi .....	170.00	Wt. 12.5	85.2	144.55	87.790	Bondelkhanda, established 1826.
Jhind .....	123.50	Wt. 19	83.8	141.12	83.326	Dakh.
Judhpur .....	174.00	Br. 9.5	95.8	160.89	100.541	Current in Malwa.
	168.30	Wt. 26	80.8	130.94	82.450	Similar to Brishhi.
Jumkeshi .....	173.00	Br. 2	92.5	161.87	98.104	Kachange 2 pr. cont. under Aukasi.
Jahlpur .....	167.38	Wt. 6	86.2	140.25	90.455	In 1800, 11 māsahs; 1809, 16 māsahs; 1813, 9 māsahs, 6 rupas; at par with Nagpur.
Jagādhari .....	165.99	Wt. 12.5	86.4	142.92	88.015	Coined at Nuzak, Khindesh.
Jaripatikh .....	171.00	Wt. 1	91.2	150.58	94.806	
Jaidar .....	173.00	Br. 6	94.1	163.89	99.017	Jaigarh; Delhi district.
	172.00	Br. 5.5	93.9	161.61	97.944	
Jainagar .....	172.68	Wt. 2	90.4	150.10	94.608	Current in Ahmednagar and Gujarat.
Jaipur .....	174.50	Br. 12	96.1	160.26	101.329	Present currency.
Kachar .....						See Narayan.
Kachhna .....	172.80	Wt. 18	84.2	143.44	88.145	
Kernali .....	171.37	Br. 8.8	93.2	163.16	98.877	
Kithor-shapur .....	174.00	Wt. 13.5	86.5	150.44	91.173	Original Shapurī (p. 5).
Kochāman .....						Jodhpur, Bīpākhī.
Kotā, an 8 .....	168.76	Wt. 5	89.6	141.18	91.629	1760, full wt. 170.5
an 12 .....	168.73	Wt. 10.5	87.5	147.29	89.269	current in Allahabad; mostly melted up and recoined.
an 20 .....	168.36	Wt. 14	85.8	144.51	87.381	
Koti .....	167.05	Wt. 18	81.2	140.60	83.212	Underabad (1832).
Kotā .....	171.64	Wt. 32	78.8	134.45	81.485	Near Bharatpur.
Kumbh .....	171.00	Br. 8	95.0	162.45	98.454	
Kotā, old .....	172.65	Br. 18.6	97.5	167.97	101.803	Kotā Raja has mints also at Jotrapatan and Gāgrana.
1825 .....	174.09	Br. 18	97.5	160.67	102.880	
Katch Kauri .....	72.16	Wt. 73.5	61.6	43.56	26.400	Coined at Anjar, Kutch.
Lalāgorā .....	171.50	Wt. 6.5	89.6	152.15	92.210	Coined by Gen. Lally.
Larin .....	74.59	Br. 11.5	90.6	71.86	43.593	Of Persia and Arabia.
Lassi .....	58.09	Wt. 30.5	79.2	45.91	27.827	Chah Chia coin at Tsang-pahu.
Lucknow, old .....	172.33	Br. 12	96.7	160.58	100.957	Coined by the Nawab Yacir.
(Pl. ed.) 45th an .....	173.00	Br. 9.2	95.6	165.21	100.127	Called Machhishahi.
Sri shahi .....	172.12	Br. 11	90.2	163.67	100.495	By King Asaf-ud-daulah.
1824 .....	172.12	Br. 6	94.1	162.08	98.231	This year's coinage; inferior. (A.N. 1229-40.)
1831 .....	172.10	Br. 11	96.2	165.69	100.412	
Mahipar .....	173.75	Wt. 8	89.2	154.93	93.895	Or Namsa; (Kily).

Name.	Weight.	Assay.	Thickness.	Pure contents.	Estimated value of 100.	Remarks.
	<i>Grains.</i>	<i>Parts.</i>		<i>Grains.</i>	<i>Rs. Ba.</i>	
Madrasi .....	174.28	Br. 5.5	91.8	165.75	99.240	
Madrasi, old .....	176.40	Br. 5.5	91.4	166.48	100.885	Old Arkat rup. by law
Rājapuri .....	173.00	Br. 7	91.6	165.32	100.315	Coined at Rājapuri.
rupee of 1811 .....	186.79	W. 3.5	89.4	168.46	100.895	Coined from Spanish dollars.
half pagoda .....	326.78	W. 5.5	89.4	291.34	176.870	= 1½ Arkat rupee.
5-fanam .....	71.51	W. 6	90.	64.36	39.908	By Calcutta assay.
2-fanam .....	28.75	W. 6	89.6	23.76	15.609	"
1-fanam .....	14.31	W. 6.5	89.8	12.85	7.785	"
double rupee .....	370.80	W. 6.5	89.8	333.09	201.834	"
rupee .....	187.18	W. 4.5	89.8	168.34	102.034	"
new standard .....	160.09	Standard	91.7	165.00	100.000	1818; present currency.
Madhushahi .....	174.03	Br. 12.5	96.9	168.61	102.188	New Halkar, Indor.
Mahawari .....	173.25	Br. 7.5	94.8	164.23	99.330	Coined at Madras by Halkar; same as Ujjain and Indor.
Muhammadsahi .....	171.30	Br. 8.5	95.2	165.00	100.000	Dilli Muhammad-sahi?
Mamgushi .....	177.75	W. 5.5	89.4	158.86	96.281	Baroda.
Malabar .....	172.84	Br. 3.5	93.1	169.90	97.549	
Mamgushi .....	169.50	W. 2.5	90.7	153.61	93.096	Current in Ahmad-nagar and Gujarat (Old) from Madras.
Mashirahud .....	171.40	W. 6.5	89.0	163.47	92.409	
new .....	168.20	W. 3.5	90.6	152.43	92.592	
Marech hakari .....	172.60	W. 17.5	84.4	143.67	88.287	Coined at Marech. Bijapur.
Mulhasi .....	172.40	Br. 8	90.8	163.78	93.260	Surat?
Mulhasi .....	165.87	W. 6.5	89.0	147.53	89.425	Surat (Noton).
.....	165.85	W. 6	89.2	147.91	89.542	Current in Malwa.
Madhol .....	173.00	W. 8.5	87.5	99.47	60.294	Coined by Maltji Rao in 1700.
Murshidabad .....	170.000	Br. 15	98.0	175.925	106.030	Old sikka rupee (See Calcutta.)
Mag rupee .....	162.89	W. 14.5	89.6	89.51	29.860	Average of 1400, assayed in 1853.
Makansahi .....	176.82	W. 10.5	87.3	154.17	93.439	Coined at Baroda.
Mulbarsahi .....	172.30	W. 5	89.0	154.35	93.446	Coined at Bagulkotā (Halkar).
Mulkapur .....	173.20	W. 46.5	72.2	125.21	75.894	Near Burhanpur.
Mangalsahi .....	178.50	W. 7	88.8	158.41	96.612	(Kelly.)
Mutrasahi .....	173.50	Br. 3	95.0	164.73	99.833	Achmuty, collector.
Mahar .....	167.00	W. 13.5	80.0	143.25	87.241	Alibabad.
Mysore .....	171.25	Br. 7.5	94.8	165.29	100.125	Maharar? Halkar's.
Nagpur, old .....	168.85	W. 6.5	91.5	154.34	93.481	Nishanpur, before 1817.
new .....	166.53	W. 13.5	85.9	143.28	86.835	Naldar, after 1817.
1824 .....	166.53	W. 28.5	79.8	132.87	80.520	Debased until 1824.
present .....	166.20	W. 17.5	84.4	140.22	84.988	Reformed in 1824.
Narkyan .....	142.23	W. 22	86.7	117.34	71.116	The Kachhar rupee; current in Rangpur, etc. assayed in 1832.
.....	143.17	W. 39	79.2	113.34	68.690	
.....	137.15	W. 23.5	81.0	111.16	67.364	
Narkyanat .....	170.00	W. 22	78.3	133.17	80.797	Baidarabad rupee, coined at Narkyanat.
.....	172.50	W. 26	80.9	139.55	84.537	By Noton full weight.
Narwar .....	170.00	W. 93	87.7	149.10	90.366	[Pudshapur.
Nepani .....	173.00	W. 38.5	75.7	120.36	79.383	A Marathia coin, 1803.

Name.	Weight.	Assay.	Finest.	Pure metal.	Intrinsic value of 100.	Remarks.
Nepal	Grains.	Dwt.		Grains.	Fl. Rs.	
a.d. Saka.						These are coins of the
1808 1731	84.00	W. 31	82.9	78.45	42.714	Gorkha dynasty of
1810 1733	83.75	W. 32	78.3	65.60	39.760	Nepal princes, Gir-
1811 1734	84.67	W. 28	80.0	67.73	41.060	van Yuth and the
1813 1736	84.40	W. 37	75.1	54.35	39.903	present Raja Ra-
1815 1738	84.58	W. 30	70.5	59.32	30.310	jendra Vikrama
1817 1740	85.05	W. 42	72.7	62.72	38.614	Rah. They are
1818 1741	84.90	W. 43	73.7	62.63	37.973	the average of a
1819 1743	83.77	W. 53.5	68.5	57.45	34.799	number assayed in
1820 1743	84.60	W. 33	77.9	63.90	39.977	1832. The coins
1822 1745	85.57	W. 26	80.8	69.37	41.922	of the old or Ne-
1823 1746	85.23	W. 34.5	81.4	68.42	42.978	war dynasty are of
1824 1747	85.47	W. 31	78.7	67.30	40.700	the same standing.
Average	84.76	W. 35.5	76.9	65.23	39.922	They are called
Naphtabad						mahra, see p. 32.
sub, 20 to 29	173.00	Br. 12	98.7	167.23	101.353	Current in Kohli-
30 to 40	171.00	Br. 6	94.1	161.92	97.491	abad. Received
41 to 43	169.50	Br. 3	92.1	159.00	95.453	at 100 per 100
						Fl. Rs., see p. 32.
Nandrabad	170.30	Br. 6	94.1	166.72	97.124	
Udipar	167.43	W. 31.5	78.1	120.82	79.285	Sindianahli? Minor.
Ujala, 1832	174.94	Br. 4	100.0	162.90	98.763	Average of 100. See
						Maheswar, Struck
						by Sindia.
Onkari	176.00	W. 17	84.6	148.02	89.710	(Kelly's Cambist).
Pankh, old	170.00	W. 68	88.4	168.16	65.582	Ikori.
Panipat	171.20	Br. 8.5	91.9	157.29	95.327	1790. Struck by Raja
Patna	177.50	Br. 11.5	96.4	161.21	97.763	Karwar.
						Dakh district.
Parkani, Nepant	173.00	W. 28.5	75.7	130.96	79.384	Company's mint,
Sumbha	173.75	W. 28.5	70.7	137.76	83.491	1795.
						By Sidhohinik 1803
Old ditto	174.00	W. 4.5	99.7	156.16	94.646	Current in S. Ma-
						rathi states.
Mudhol	173.00	W. 8.2	97.3	99.47	60.284	By Bhudla family,
						200 years ago.
newest	177.50	W. 7	88.7	157.88	95.684	Ry Malaji Ran. 1790,
						rare.
Persian rupee	177.25	Br. 16	98.4	174.30	105.634	Colled in the Seward
	175.00	Br. 19.5	98.2	174.66	105.856	state.
Pentapgarh	170.80	W. 9.5	87.6	149.27	90.460	See Path 'Ali.
Phalsburi	174.83	Br. 9.5	95.6	167.68	101.565	[old.]
Phalsburi	171.70	Br. 1.5	92.3	138.46	90.039	Naton. See Sallim-
						Phalsburi?
Pondicherry	175.33	Br. 8.5	95.6	167.68	101.525	Ankasi rupee struck
	173.98	Br. 10	95.6	166.73	101.040	at Phalsburi.
old	172.61	Br. 11	96.3	167.09	101.500	French Arkli.
Raja	170.16	Br. 8	95.0	167.30	101.390	
Palti faom	0.60	Br. 5.5	94.0	5.26	3.190	[under Perny.
Puna, old	170.00	Br. 12.5	96.9	170.50	103.333	Struck at Mairat,
tri sikka	170.50	Br. 1.5	91.3	150.20	96.480	Old currency. See
hali	174.75	Br. 11.5	96.4	168.46	102.090	Ankasi.
						For present standard
Porebunder kauri	74.50	W. 52	70.0	52.15	31.000	Colled for irreun-
						tile purposes.
Rajgarh	173.75	Br. 11	96.2	167.23	101.353	Colled at Porebun-
						der, Katch.



Name	Weight	Assay	Purity	Pure metallic	Intrinsic value of Rs.	Remarks	
	Grains.	Dwt.		Grains.	Pd. Rs.		
Rāj-muhri .....						See Assam rupee.	
Rājshahi .....	169.78	Wt. 14	85.8	143.69	68.298		
Rāichur 1 .....	173.00	Wt. 4.5	89.5	155.34	94.144	(Madras table).	
2 .....	175.00	Wt. 5.3	89.4	156.41	94.792		
Rārfagurh .....	168.35	Wt. 11	87.1	146.00	88.831	One of Sindia's mints	
Rikāshī .....	173.00	Wt. 10	87.5	150.50	91.212		
	172.00	Wt. 12	86.6	149.07	90.343		
Sāgar ..... 1815	170.10	Wt. 8.5	88.1	142.90	90.849	See Bālamāhi; std. 80 rati silver 10 r. alloy; established in 1789; received at 120 per 100 Pd. Rs.	
	1810	170.48	Wt. 9.5	87.7	140.32	90.624	
new, 1824	186.00	standard	91.7	165.00	100.000	The Pd. rupee.	
Sahāranpūr .....	171.00	Br. 4.5	92.5	169.96	96.943	Mint abolished in 1800.	
Skimashī ..... 20	168.11	Wt. 34.5	77.3	129.02	78.748	Struck at Prathap- garh, Ajmir, and current through- out Malwa.	
san, 45	168.53	Wt. 27	80.4	135.54	82.148		
oldest, ...	168.50	Wt. 6.5	89.0	150.00	90.909	Jumaria, (Mando- wall's rept., 1823).	
	1810	168.30	Wt. 12.5	80.0	145.00	87.878	Murumia, ditto.
	1820	168.50	Wt. 25.0	81.8	137.00	83.090	Mithi, ditto.
Shāmī .....	170.10	Wt. 1.5	91.1	151.86	83.845	Dihli district.	
Sandora .....	171.30	Br. 1	92.1	157.74	95.098		
Serua .....	165.00	Wt. 22	92.5	136.12	82.380	Sarovai of Ajmir.	
Sariliana .....	171.20	Br. 2	92.8	108.30	93.073	Bigam Sarua +	
Saronj .....	168.35	Wt. 16.5	84.8	142.75	86.316	Malwa.	
	170.91	Wt. 8	90.0	153.82	85.220		
Shāhpūrī .....	174.00	Wt. 10	87.4	151.96	92.118	Current in Betgaum, Ajmir, etc.	
Shamshiri ..... 15	172.37	Wt. 30.5	89.6	138.80	84.150	Current in Aurang- abad.	
san 21	171.51	Wt. 31.5	78.5	134.80	81.692	Assayed in 1823, see	
san 28	172.00	Wt. 28	89.0	137.69	83.256	Gorind bakshi and Haidarabad.	
Sindiasahi .....						See Udiptar.	
Sohāgpūr .....	168.90	Wt. 24	81.7	136.20	82.007	Established in 1810, current in Nas- bedda.	
Sonkt, Dihli .....	178.77	Br. 10.5	98.1	175.41	106.318	The years 1 to 10 inclusive.	
subik .....	177.37	Br. 10.5	96.6	170.44	102.358		
san 1 to 10 .....	179.12	Br. 16	8.2	176.13	106.747	Same as sikkā rupee. See Penu.	
Sri sikkā .....						See Ajmir, 1815.	
Sriathi .....							
Srinagar .....	170.06	Wt. 6.5	89.0	181.28	91.686	In Nānā Govind's state. Est. 1794, principal currency of Bundelkhand.	
old .....	167.30	Wt. 16	85.0	142.37	85.259	See Jilāon.	
Sunāmalla .....	173.54	Br. 6.5	91.0	169.44	96.632	Sarat.	
Sūrat .....	174.50	Br. 5.5	93.9	163.96	97.367	Under the Nawab.	
old .....	176.00	Br. 16	98.4	172.66	105.246	Old Dihli standard.	
	176.25	Br. 1	92.1	162.50	98.363	Depreciated, see p. 24.	
1800 .....	178.32	Br. 2	92.5	164.94	99.200	Chosen as Bumbay rupee.	
Tāmāsāhi .....	169.96	Wt. 8.5	88.1	149.73	90.742	Nickname from cop- per?	
Thanna .....	170.80	Wt. 2	90.8	155.14	94.026		



Name.	Weight.	Assay.	Purity.	Fine contents.	Intrinsic value of 100.	Remarks.
Ti-māsha or (three māshas) .....	Grains. 34.26	Br. 3	92.9	Grains. 31.87	Rs. 19.315	Coined in Nepal? current in Srinagar.
of Ladakh .....	28.16	W. 31	—	15.62	9.467	Ditto, debased.
Topasāhi .....	30.00	Br. 12.5	95.5	26.75	23.484	Coined at Lassa.
Toragū Nilkānt .....	165.12	W. 22.5	92.3	135.28	82.354	
Toku .....	170.00	W. 21	92.0	155.40	63.673	Struck by Hālā Shāhī, 1789 B.
Tukāsāhi .....	172.24	W. 27	90.4	158.51	83.944	Aurangābād, (1832).
Triṇāmālī .....	173.10	Br. 5.5	94.0	162.77	98.948	Current in Ahmadnagar. (Nizam).
Triṇāmālī .....	176.50	Br. 8	95.0	167.67	101.618	Karshatī.
Vaṇkatapati .....	172.72	Br. 11	96.2	166.35	100.750	Ditto.
Vasiri .....	168.62	W. 11.5	95.9	146.49	68.783	Sohāgpur, in hill tract E. of Jabalpur.
Vasirshāhi .....	170.00	W. 12	96.3	146.92	88.864	
Wahgaum .....	172.95	W. 0.5	91.5	167.88	91.084	Current in the Dekkan. (Nizam).
Yaswanti .....	174.80	Br. 7.5	94.8	163.84	100.300	Struck by Jaswant Rāo Holkar, 1806.
Zu'lfikar .....	174.10	W. 17.5	88.4	147.05	91.06	See Haidarābād.

(To convert the decimals of the last column into *lela* and *pa'is*, see the Table on page 12. For explanation of the present Table, see page 36.)

<sup>1</sup> This curious and handsome coin (for a specimen of which I am indebted to Major Storey), might be mistaken for an antique from its bearing the following Sanskrit inscription in well-cut Nāgarī characters, on the obverse and reverse respectively.

श्री इन्द्रप्रस्थस्थितो राजा चक्रवर्ती भूमण्डले ।  
तत्प्रसादात् कृता मुद्रा लोकेष्विष्य वैविराजिते ।

श्री लक्ष्मीकान्तपदभोजधमराजितचेतसः ।  
येश्वन्तस्य विख्याता मुद्रया पृथिवीतले ॥  
शके १७२८

*Br. Indraprasthasthito rāja cakravartī bhūmaṇḍale,  
Tatprasaḍāt kṛitā mudrā lokeṣv iṣyavairajite.*

*Br. Lakṣmīkantapadabhōjadhamarajitachetasah,  
Yaswantaṁsya vīkhyatā mudrayā pṛthivītāle.*

"By the permission of the Rājā of Indraprastha (the king of Dillī), the Emperor of the world, this coin has been struck by the renowned Yaswanti (Jaswant Rāo Holkar), whose heart is as the black bee of the lotus foot of Lakṣmīkant,—to circulate throughout the earth. An. Sakre 1728<sup>1</sup> (= A.D. 1806).

## ASSAY of Bullion generally, brought to the Calcutta Mint.

Designation.		Assay.	Intents of 50 baits in P. Ba.	Produce in sikka rupees.
South American bars marked	24 dia.	Br. 20	100.091	102.273
	11 23	Br. 17.5	107.954	101.207
	11 17	Br. 14	100.304	99.710
	11 10	Br. 8	103.636	97.159
Plata fina recovered from amal- gamation		Br. 17.5	107.954	101.207
China cakes, large: Adthi kharai (ele- phant-hoof)		Br. 16	107.273	100.509
Doitto, small gharai kharai (horse-hoof)		Br. 14.5	100.591	99.929
Calcutta refined cakes, called Madras		Br. 15.5	107.045	100.355
" Morahidabad		Br. 15	100.818	100.142
" Dacca		Br. 12	105.454	98.663

## ASSAY of Aya Silver Cakes.

Burmese denomination.*	Meaning of Aya Assay Report.	Stamps.	Calcutta Assay Report.	Produce.	Value of 100 baits in P. Ba.
Ban (supposed to be pure)	pure silver	106	Br. 16.5	95.6	101.07
Kharabat (shell circular)	5 pr. st. under do.	95	Br. 6.5	94.3	145.16
Dain, ta kyat det	10 pr. st. above st.	93.5	Br. 2	92.5	142.38
" ko moo det	8 pr. st. "	92.0	standard	91.7	141.00
" sheet moo det	8 pr. st. "	91.8	Wa. 4	90.0	139.44
" kwan, neet moo det	7 pr. st. "	90.9	Wa. 3	90.4	139.08
" nga moo det	5 pr. st. "	89.7	Wa. 5	87.6	137.79
Madain (alloyed dain)	"	"	Wa. 42	74.1	124.98
Yowetnee (red flowered or star)	Aya standard	85.0	Wa. 4	90.0	139.44
" kyat ge	10 pr. st. alloy	77.3	Wa. 14	85.8	132.03
" tahay nga kyat ge	15 pr. st. "	73.9	Wa. 38.5	75.6	116.32
" sheet tahay ge	20 pr. st. "	70.8	Wa. 34	77.5	119.21
" thoon tahay ge	30 pr. st. "	65.4	Wa. 72	61.6	84.83
" le tahay ge	40 pr. st. "	60.7	Wa. 77	59.6	91.66
" nga tahay ge	50 pr. st. "	58.7	Wa. 88	55.9	84.60
" kyauk tahay ge	60 pr. st. "	53.1	Wa. 109	50.4	71.14
" khwon sheet tahay ge	70 pr. st. "	50.0	Wa. 107	51.3	72.42
" sheet tahay ge	80 pr. st. "	47.2	Wa. 112	49.3	69.22
" ko tahay ge	90 pr. st. "	44.7	Wa. 116	43.5	66.66
Yowetnee gyan	1 yowetnee, 1 alloy	42.9	Wa. 131	37.6	67.04
Bangoon yowetnee	5 per cent. better than Aya stand.	90.0	Wa. 4	90.6	139.44

(A deduction of 1 per cent. should be expected from the produce of Aya bullion, on account of the vitreous coat of litharge which adheres to the lumps).

This table is abstracted from the examination of thirty-five specimens of silver specially prepared in Aya, in presence of the Resident, for the comparison of the Burmese with the English assay.

\* See page 24.

## TABLE of Copper Coins.

(Where not otherwise mentioned, the name tells the place of coinage and circulation. Since 160 grains is the weight of the present pais, the column of weight also expresses the intrinsic value of 100 of each sort in Company's pais.)

Name.	Weight in 1000 grains.	Value in 1000 grains.	Where current. Remarks.
Agra paisā .....	148	60	Current in the Agra district.
Akbari, old .....	300	30	Idiota, but scarce.
Alahabad .....	141	—	—
Almorah .....	83	—	—
American runā .....	167	—	One cent, 1816: (by law of 1790, should be
Asiagarh .....	170	—	Square, Hindi inscription.
Bahāshāhī .....	263	—	Throughout Kalpi, Bāgar, &c.
Bareilly .....	149	40	—
Bahār .....	161	64	See Patna.
Bendahra .....	284	64	By Regulation X. of 1809, Triaculi paisā, also Reg. VII. 1814. (See page 8 and 39.)
Bhilāra .....	207	—	—
Bhilāra .....	235	—	—
Bhopāl .....	235	—	—
Bishanmāth .....	235	—	—
Bombay, 1797 .....	212	48	Marked '48 to one rupee, 4 V. E. I. C.' and arms.
1804 .....	200	50	Coined in England; device, arms, and words, 'A. S. C.'
1833 .....	160	64	New coinage, with the same device.
Bharatpur .....	216	32	—
Bundi .....	214	32	—
Calcutta, 1792 .....	82	192	First pā' struck by contract at Patna.
1792 .....	40	—	Marked 'e. V. n. 1792,' and on the reverse a shield and crest.
1795 .....	160	64	Quarter-Ann, ordered on the 4th May, 1796,
1796 to 1809 .....	156	64	to 12 Ann weight, and afterwards in 1809,
1809 to 1817 .....	161	64	to 9 Ann, the weight of the Bāhar paisā.
1817 .....	160	64	Present standard weight by Reg. XXV. of 1817
half ann .....	260	32	By Regulation III. of 1831. (See page 4.)
one pā' .....	33	192	—
Ceylon .....	137	—	Coined in England, device an elephant, 'two silver,' the one-, and the half-, silver in proportion.
Chikna .....	240	30-32	The Madhuakhi worn smooth: throughout Banda.
Chinawa .....	190	—	Chinawa? In Lahor, near Kangra.
China .....	600	—	Brass coin with square holes, various sizes.
Cholan .....	240	32	Same as Chikna, current in the Doab.
Dihli .....	172	44-60	Coined until 1818, weight one tola, or 80 to the str.
Dutch .....	250	—	Square lump, marked 'two str.'
" .....	120	—	Triangular, rude coin marked 'one str.'
English penny .....	412	—	Old penny-piece.
new .....	290	—	New penny, legal weight 291.6 grains.
French sous .....	150	—	Brass, five centimes, legal weight 154 grains.
Farrukhabād .....	284	26	Prescribed by Reg. III. 1806 (not coined).
1816 .....	160	64	Established by Regulation XXI. of 1816.
Gokala or } Gandasahi }	110	70	Current from Mathurā to Mainpuri.

Name.	Weight in Troy grains.	Value in Rupees.	Where common. Remarks.
Gorakhpur .....	186	25-36	Banars district, former standard piece.
Gwāliar, old .....	146	52	Marked Muhammad Akbar Shah.
Haidewā .....	290	...	Near Nagpur.
Hātra .....	290	34	Current in Nagpur.
Indur .....	115	...	In Malwa generally.
Jāhān .....	252	60	Bhandarkhand, the Bilhāshi piece.
Java, 1814 .....	172	...	Marked '1st. B.V. K.I.C.'
Jāhān .....	260	...	Current in Bhandarkhand.
Jahānpūr .....	260	...	Naraindā valley.
Jaipur .....	290	33	Agra and Jaipur districts.
Kakureti .....	252	40-45	Near Panna in Bhandarkhand: bears a device, resembling a Hanuman—3120 per coin.
Khetri .....	252	...	Kakureti or Kakureti.
Karoli .....	251	35	Current at Dhill and Karoli.
Madras, 1803 .....	180	...	XX-line piece, coined in England.
1806 .....	120	...	Three falas, or one falas khand (little fanam).
1832 .....	100	64	Equalised with Bengal and Madras piece.
Kotā .....	270	34	In Kotā, Ajmer, etc.: a square coin.
Lakhnaw, old .....	195	...	Mushkīshāh; Current in Oudh and Kanauj.
new .....	185	46	Shirāshāh; 1 to Mainpuri.
1806 .....	284	19	See Farrukhshāh.
Madhusāhī .....	270	35-40	Chief currency of Allahābād and the Doab, formerly of Benares and Mirzapur.
Malwār .....	34	378	A very small coin.
Marwar .....	330	...	
Muzaffarshāh .....	180	...	
Mausūri .....	160	38	In Agra, etc.
Mathurā, old .....	147	16	
new .....	125	64	Agra, Mathurā, Bhandarkhand, etc.
double .....	270	34	
Nazir Shāh .....	131	...	See of Ghias-ud-din Shāh: ancient square piece of Nagari district.
Nepāl .....	297	...	Current in the Turā.
piece .....	164	80	Bahadurshāh, coined and current in Nepāl.
Najibshāh .....	242	60	In Bareilly and Bhandarkhand.
Nagar .....	176	...	Marked 'Nagar 5721' device, a rude elephant; some have 'Pon, Paton, or Zarb-i-paton.'
Nazwar .....	107	...	In the Naraindā Territory.
Nawāshāh .....	197	47	Old Lakhnaw, so called.
Patna, old .....	240	32	Of native fabrication.
1817 .....	101	64	Coined at Patna and Calcutta.
Penang .....	135	...	One hundred to the dollar; and halves. Coined in England. Current in Penang, Singapore, and the Malay peninsula.
Pattāla (Rājashāh) .....	176	...	Current in Pattāla, Dhill, etc.
Rājgarh .....	274	36	
Rājmahal .....	160	...	Coined at Rājmahal.
Rowāshāh .....	220	45	In Rewā: device, a kind of Nagari figure one 9
Sāgar .....	...	...	See Bilhāshāh.
Supūr .....	173	...	The 'Nagar', piece, so called by the natives.
Sakarnepūr .....	255	35	Also called Alamsāhā.
Tari .....	254	42	Tehri.
Tehri .....	250	43	In Bhandarkhand, equal to Pāhān.
Telingā .....	150	...	Telingā, or Southern India.
Tranquebar .....	120	...	Dutch, marked '1 St.' (one stiver).
Udipūr .....	65	180	About double the Malwār.

The weights, unless otherwise stated, are taken from specimens collected chiefly at Benares.

## SYMBOLS, ETC. ON MODERN INDIAN COINS.

Before giving the Catalogue of Symbols figured in plate xlv., it will be convenient to direct the reader's attention to plate xlv., which gives such samples of the modern coins of India as will enable him to recognise their principal varieties at sight. Those of Nepal, Assam, Kachar and Lassa, are sufficiently distinct from the Nāgarī, Bengālī, and Tibetan characters on them; the pagodas, also, of South India cannot be mistaken. The Nāgarī coin of Kotā may be classified from its Lotus symbol, although it is otherwise difficult to decipher the inscription. But the great majority of coins treated of in the foregoing remarks and Tables are similar to figures 2, 8, 9, 10, 11, and 12, which exhibit portions only of a Persian inscription, generally of very imperfect execution. These can only be known by the signs or symbols of the various States inserted in some conspicuous part of the impression: thus, No. 11 is known to be of Indur, from the Solar effigy. The following particulars of the coins in plate xlv. will save the necessity of any further general remarks, in addition to those already made at page 40.

## 1. THE BENGAL NAGARĪ COIN.

Now (and up to 1835) coined at the Calcutta mint; bearing the Shāh 'Alam diadem, explained in page 2. All the Company's silver and gold money of Bengal, up to the present day, is of the same style, containing the whole inscription, of which parts only are visible on most of the native coins.

## 2. THE MALWA ALIYMAHĀL COIN.

Current in Malwa, and coined by the Rājā of Pratāpgarh. The words visible on the

Obverse:

شاه مال حامی

(intended for *Shāh 'Alam hāmī* *mal-wā,* etc.) and the Hijra date, 1199, which, however, does not correspond with the year of reign on the Reverse:

سید جلوس میمنت ۲۹ سالوس

"29th year of the prosperous reign."

This is the earliest year of the coinage of these rupees; those of the 45th sun were in course of coinage in 1823. They were issued to the troops at the exchange of 122.6 per 130 Farrukhābād rupees.

## 3. THE RAJALONGGARH COIN.

(Near Kotā Bund) known by the Lotus symbol; coined by a petty zamindār; much debased. In the Bhākā diadem,

Obverse:

श्री रामचपरासी पवनपुत्र वनपायन

*Śrī rāma cāpuraśī pavanaputra vana-pāyaṇa*. "All-powerful out of the air (Harmahā) servant of Rāma."

Existing Coins of India







Reverse :

यसपर कापा में राजा जयसिंह के २१ अवतार ।

*Is par chāpā man rajā Jay Sīṅh ke 21 Jayamgar.* 'On this coin is imprinted the 21st (year) of Rājā Jay Sīṅh at Jaynagar.'

The initial and final letters are imperfectly visible on the coin; the purport shows it to be struck at Jaynagar, a village near Bajranggarh.

4. THE NEPAL MUH, OR HALF RUPEE.

Obverse :

श्रीश्रीश्री प्रताप सिंह साहदेव १६८६

*ŚrīŚrīŚrī Pratāp Sīṅh Sāh Dēv* (titles of the Rājā) 1686.

Reverse :

श्रीश्रीश्री गोरक्षनाथ

*ŚrīŚrīŚrī Gorakṣanāth*, (the principal god worshipped by the hill people, whence their name of 'Gorkhas' is derived.)

Centre :

श्रीश्रीश्री मुक्तिश्री

*ŚrīŚrīŚrī Muktiśrī*, 'the omniscient goddess Devi.'

5. AN ASSAMIAN RUPEE.

Of an octagonal form. The inscription is in the Bengālī character, but in the Sanskrit language.

Obverse :

श्री श्री हर गौरी पद्मिनी मण्डलारण्य

*ŚrīŚrī Hara Gaurī padmīnīya maṇḍalāranya*, 'The sinner of the honey of the foot of Śrī Hara Gaurī.'

Reverse :

श्री श्री महा देव देव राजा सिन्हासना नाक १७३०

*ŚrīŚrī mahā Svarga Dēv Dēva Rājā Sīṅhasana.* *Saka* 1690, 'The blessed and celestial Rājā Sīṅh.' The *Saka* date corresponds to A.D. 1708.

6. A KACHAR RUPEE.

In this the Bengālī letters are connected together by parallel lines.

Obverse: The inscription is not intelligible.

Reverse :

श्री श्रीश्री चन्द्र नारायण ।

*Śrī Śrīśrī Chandra Nārāyaṇa* (the Rājā's name).

7. CHINESE-TIBET SILVER MONEY.

Coined at Lassa (*vide* page 33). On the obverse, in the Tibetan character, *gtsang paṣu*, 'pure money,' *chak heḥhin* (name of the Chinese Emperor). On the four corners of the margin of another coin similar to the one depicted, are the four letters *nyi hu rtaṅ lsa* (25) meaning the twenty-fifth year of the cycle of sixty years (= A.D. 1851); the date on the coin in the plate is not decypherable. The Chinese

<sup>1</sup> The plate states it to be a Pratāpgarh rupee, as it was labelled in the Assam-office cabinet; but on reference to Major Stacy, at Nasirabad, it turns out to be as above. The inscription was read by a pandit at that place, who makes the last words, 'Jayasīṅh ke rāj Jayasīṅh men,' but I consider the above more consistent with the specimen in my possession.

inscription on the reverse consists of four words, *ka-hen pao-chung*, 'the Emperor Ka-hen's 'precious money.'

#### 8. THE ARKÁT RUPEE.

The full inscription of this (the Madras) coin is given in page 3. It is known by the part of اركاٹ visible, and by the groups of four dots and the lotus or lily.

#### 9. THE SÍGAR RUPEE.

In this the Sháh 'Alam distich can barely be traced. The trident, star, and flag of Siva are its distinguishing marks.

#### 10. THE NÁGPÚR RUPEE.

This coin bears the inscription of Muhammad Sháh. *Sikka mahdrik bid(-sháh Ghásí Muhammad Sháh)* only recognizable by the two final letters of the Emperor's name. It is known to be of Nágpúr by the 𑂔𑂰𑂶𑂰 (or 𑂔 inverted<sup>1</sup>) which may stand for Bhunsa, the name of the reigning Rájás of Nágpúr; the 't' (*tarb-i ...f*) may be the final letter of Hingán Ghát, the place of coinage.<sup>2</sup>

#### 11. THE PÉROU RUPEE.

Parts of the words *Sháh 'Alam bidsháh* are here visible, and the usual year of the reign: the solar disc distinguishes the coin.

#### 12. THE CHIRÁKAT, OR NEW LONDON RUPEE.

Besides the absurd armorial bearings, constructed of two tigers, two fish and a dagger, surmounted by a royal umbrella; this rupee bears the following inscription:

Obverse:

سکه زد بر سیم و زر شاه زمین غازي الدين حيدر عالي از فضل  
رب ذوالعین سنه ۱۲۳۸

'The king of the world, Gházi-ud-din, Haider 'Alí, by the grace of the Lord of Glory, has struck coin in silver and gold, A.H. 1238.'

Reverse:

ترب منه ۵ جلوس میمنت مانوس دار السلطنة صوبه اوده  
'In the 5th year of his illustrious reign, at the capital of the sultan of Oudh.'

#### 13. AN ANCIENT GOLD RÚP.

with part of an inscription in the Sanskrit character on one side, and a single image on the other.

#### 14. A MODERN DOUBLE PANDUA.

Struck at Madras, showing the character of the former English currency of that presidency.

#### 15. THE COMMON BHARIPÚR PÁISÁ.

Shewing that the copper coins may be also recognised by their ap-

<sup>1</sup> The late Emperor of China, written 'Kia-king' is the Anglo-Chinese Calendar, reigned from 1781 to 1821.

<sup>2</sup> I have since been informed that the symbol on the Nágpúr rupee is intended for ३ the Maráthi numeral equivalent to 4½.



## Symbole von heiligen Gegenständen



propriate emblems. The inscription will be seen to be part of the Muhammad Shah legend.

PL. MADRAS COPPER COIN.

Struck in England for circulation at Madras (see page 4). The same coat of arms will be found on the Bombay and Poona copper currency.

CATALOGUE OF SYMBOLS ON MODERN INDIAN COINS.  
(PLATE XLVI.)

[Taken from specimens in the Assay Office or in the author's possession. In some cases (marked ?), it is probable that the specimens have been misnamed from their being found current in other districts with different names.]

VARIETIES OF THE RUPEE, ('RUPEEA')	
STAR, AND DOT.	
1 Company's rupee. Gokula rupee?	31 Madras, Shikhar, 'Alinagar.
2 Barraj rupee.	32 New Madras.
3 Islāmābād mahr of Aurangzeb.	33 Garuāh rupee (Arakā).
4 Vaidrāhī rupee, see B. Bālāhāhī.	34 Chaudā.
5 Sarat & old Bombay (with a crown).	35 Gokula, or Gaudāhāhī pākā.
6 Kesh (in Allahābād) with 21.	36 Kāhā.
7 Seingar, with 43. Sāgar with 45.	37 Ogerā pākā. Chaudā: common.
8 Jāhā. Also 10.	38 Kāhā.
9 Sahārangpur: common.	39 Pākā: Mahr of Dāhā.
10 Jāhā. with 5 leaves, 60 other.	40 Bhāratpur pākā (see plate xlv.).
11 Sāgar with 45. (see plate xlv.)	41 Old pākā found in Sāgar.
12 Mārāhāhāhī.	VARIETIES OF THE RUPEE, ('RUPEEA')
13 Barāhī, with 20.	42 Mārāhāhāhī. Jāhā, Sāgar.
14 Sahārangpur, with B. 14] Old Jāhā.	43 Sahārangpur with 7.
15 Old Sarat mahr.	44 Old Sāgar. Kāhā.
16 Jāhā or Jāhā?	45 " Jāhā, etc.
17 Bīrāhī gold mahr, Aurangzeb.	46 Kāhā pākā, with 43, etc.
Nāgpur, with 24. Gokula, with 78.	47 Nāgāh mahr. (see plate xlv.)
18 Common: Ujjāh, with 22 or 27.	48 Bhārat, Bālāhāhī, Bhārat.
Ujjāh.	49 Tāhāhāhī pākā?
19 Arkā. Chikā Arkā, etc.	50 Gāhāhāhī.
20 Private mark of Bārāhāhāhī mahr (see plate xlv.).	51 Old Dāhā and Pārāhāhāhī: common.
21 Kesh or Gāhā, with 6.	Nāgpur of Jāhāhāhāhī.
22 Ujjāh.	52 Keshāhāhāhī, old Nārāhāhāhī pākā.
23 Old Farrukhāhāhī rupee and mahr.	53 Bārāhāhāhī, Bālāhāhāhī.
24 Bhāratpur. (see plate xlv.)	rupee, rāhāhāhāhī, 'rupee, rāhāhāhāhī.
25 Chāhāhāhāhī rupee (Arakā).	54 Kesh rupee—and with 27.
26 Bhāhāhāhāhī, with 62, 63.	55 Kesh rupee.
27 Mārāhāhāhī, common, Chāhāhāhāhī.	56 Bārāhāhāhī. Kesh.
VARIETIES OF THE RUPEE, ('RUPEEA')	
28 Jāhā, old, with 22.	57 New Kesh, with 26.
29 Dāhā.	58 Bārāhāhāhī (Nārāhāhāhī).
30 Bārāhāhāhī, with 43.	59 Kesh variety, Bārāhāhāhāhī.
	60 Bārāhāhāhī, old, small with 20.
	61 Bhāhāhāhāhī, with 26, 62, 63.
	62 " reverse.
	63 " "

**BARCHHĀ, 'SPEAR' OR 'SCEPTER,' GUDĀ,  
OR 'MACE.'**

- 64 Jodhpūr. Pāli.  
65 Kochāman, with 92. Bopāli.  
66 Jodhpūr. Nāgar.  
67 Bardli? Uchā? Pāli.

**JHĀP, THĪMAR, 'BRANCH OR SPRIG.'**

- 68 Bhilārā.  
69 Jaipūr-Siwāl gold muhr.  
70 Ajmir.  
71 Chitor, Krishnāgarh.  
72 Sālimāshī? (Jaipūr).  
73 Jaipūr rupee and muhr.  
74 Banderola?  
75 Mathārā. Jaipūr.  
76 Chīnār, with 100. Udipūr, Chitor  
old?

**77 Bārānpūr?**

**VARIETIES OF THE MOUR, OR 'TEND.'**

- 78 Gokula paisā.  
79 Oudh, Lucknow old rupee.  
80 Dittā, Bardli. Old Benāra.  
81 Machlisāhi of Lucknow.  
82 Benāra old.

**SŪMA, 'THE SUN.'**

- 83 New Indor rupee and muhr.  
84 Indor.—Ujjain.  
85 " copper coin.  
86 *Bel paisā*, Maheswar, with 87.  
87 *Lagam*, Maheswar rupee.  
88 *Paisā*, 'flag or standard of Siva.'  
Sāgar rupee (p. xiv.). Nāgpūr.

**VARIETIES OF THE 'SWORD,' SHAMASHI.**

- 89 Chanda, Gwalīar,—common.  
90 Haidarābād, of Kāsim 'Alī.  
91 " Govind-bakshī.  
92 Common shamashī.  
93 Kochāman, with 64.  
94 Nāgpūr, with 17. Katmandu (see  
p. 31). Bākh.  
95 (Pistol) Agra paisā.

**VARIETIES OF THE RAJĀR, OR 'DAGGER.'**

- 96 Akbar II. of Dillī—small.  
97 Narwar.  
98 Bhartpūr. (see plate xiv.)  
99 Siwāl gold muhr of Muhammad Shāh,  
with 12: small.  
100 The *Araks* of Pura.—Chitor.

**NUMERALS AND LETTERS.**

- 101 (10) Hālī sikh of Pura, Nāgpūr.  
102 (9 or 17) Rawā paisā. Bhilār?  
103 (70) Jabalpūr.  
104 (55) Nāgar.  
105 (75) Indor old rupee.  
106 a (14) Old Nāgpūr:  
4 (9) New do.<sup>1</sup>  
107 Tekri, Bandelkhānd, illegible.  
108 (श्री *arī*) Śrīrādī rupee of Ajmir.  
109 (र *ā*) Haldār of Malār.  
110 (ग *ga*, 'cow') Chitor; from the pro-  
verb regarding the slaughter by  
Akbar: "*gao mara ke paisā*."  
111 (सा *sa*) Gold muhr, unknown?  
112 (सा *sa*) Defaced Dillī gold muhr,  
see 29.

**MISCELLANEOUS.**

- 113 (शेही) Shihghā in Nūpā.  
114 (Pangā, 'fate') Akmorah.  
115 Sālimāshī, date 1199. (see plate xiv.)  
116 " Variation.  
117 "  
118 Mawāri paisā.  
119 Kukunī, near Pannā in Bandel-  
khānd (the god Hanumān?).  
120 (elephant) Nagar, Patan, Sopūr?  
Struck by Tipū?  
121 (Chāeta, 'the royal umbrella') on  
some of Muhammad Shāh and Shāh  
'Alam's Dillī coins.  
122 Variety of "  
123 Etāwa muhr.  
124 Jhānd.  
125 The *sunāshā* emblem of the 7th Jina,  
found on some coins.

<sup>1</sup> The distinguishing symbol of the old Nāgpūr rupee, struck at the Chanda and Hingan Ghāt mints was as above, a Marāthī ४१. When Barchā Rao and Dr. Gordon had charge of the mint, their mark was a flag (88). The new Nāgpūr since 1825 has the figure 9 above this flag. Other minor varieties are marked as follows:—the Yeshwant Rao Nāgpūr, by +; the Man-Bhar-Sāhi, by =; the Ugas-Sāhi, by a Marāthī १० (fig. 101); the Bānji Tanti has a half moon ☾; the Narsingh Rao the same with a dot in the centre ☾; the Siva Rao, the same with a dot on one side ☾. There are many more, but they are not considered *chāla* or 'current.'

## NOTE ON THE HISTORY OF THE GOLD AND SILVER CURRENCIES OF INDIA.

[As the general subject of metallic currencies is just now attracting the serious attention of the European public, it may be useful that I should recapitulate briefly the facts to be gathered from the detached notices of the coins of the various kingdoms and diverse epochs illustrated in the preceding pages, which throw light upon the little known history of Indian mintage; and further, that I should complete the review by exhibiting the action of our own civilization on the circulating media of those later days, especially in reference to the important question of the institution and organization of the gold coinage as a legal tender, and its eventual supersession as such in 1896.

I have elsewhere expressed an opinion that the people of Hindústán, in very early times, had independently achieved considerable progress in the art of coining; even before Greek civilization reached them through the influence of Alexander's expedition, and the subsequent settlement in India proper of the Bactrian-Hellenes. Indeed, we are able to trace by the produce itself, each phase of mint development and each successive effort of invention tending to the production of a perfect coin. The earliest movement is seen in the fabrication of irregularly outlined flat pieces of silver or copper, of fixed weights, whose currency is marked by the symbols of consecutive dynasties, punched at hazard on their surfaces. Next, we remark a more careful rounding off of the metal, and the application of a single die over the whole of one surface, the other being left blank. As we proceed, we meet with complete coins; but these are cast in moulds, and may possibly indicate separate and independent progress. Successive modifications and improvements are observable in either class, which it is not necessary to follow more at large in this place; and, finally, we arrive at excellent specimens of an issue of fairly coined money, seemingly local in Northern Hindústán,<sup>1</sup> which there is good reason to assign to a period prior to the advent of the Greeks. Coins of these epochs have been found in silver, copper, bronze, and lead; the non-discovery of any examples in gold does not necessarily lead to the inference that the metal was not used for coining purposes; but merely amounts to the fact that, if used, it was of rare occurrence.

<sup>1</sup> Coins of the Behat type. Article X.



The Bactrian-Greeks, as far as their Indian provinces tell the tale, would appear to have restricted themselves to a currency of the two metals, silver and copper. Their successors, the Indo-Scythians again, discontinued the issue of a silver currency, and supplied its place by a gold coinage; increasing, simultaneously, the weight of the copper pieces. There is some uncertainty as to the dates of succeeding dynasties; but we find the Guptas,—who imitated the devices of the Indo-Scythian money,—in possession of a copious gold currency in their eastern provinces on the Ganges, aided by a limited silver, but sufficient copper medium of exchange; while their dominions towards the Western coast were supplied almost exclusively with a silver coinage based upon the mintages of the Śāh kings of Saurashtra (Gujarāt); who in their own case had previously copied the style of the Greek hemi-drachmas of Apollodotus and other sovereigns. Here we must pass over centuries, and present our next tabular in the time of the Brāhman kings of Kāśhā and the Panjāb (about the 10th century A.D.). In this instance also the currency is confined to silver and copper. Mahmūd, and his successors of the Ghazni dynasty, employed gold in addition to the lower metals. At the period immediately preceding the Muhammadan occupation of India (A.D. 587, A.D. 1191) the northern provinces of Hindūstān were furnished with a currency composed of a combination of silver and copper mixed in uncertain proportions: while the Raṭṭar monarchs of Kanauj still continued to issue gold. The former coins, which were entitled after the capital, Dillwālā (دلیوال),<sup>1</sup> were adopted by the Pathān Sultāns of India, and a middle currency of such incorporated metals remained in use up to the time of Bābur (A.D. 930, A.D. 1523-24). Simultaneously with the retention of this type of the local money, the Muhammadans introduced modified forms of dirhams and dinars, of equal weights (174 grains). At what relative proportion these stood to each other we are left to conjecture, as history is silent on the subject, and the coins themselves afford us no means of instituting a comparison. The lower currency was completed by a copper coinage, which in some cases extended to so minute a division as 17.4 grains.

The celebrated Muhammad bin Tughlak (A.D. 725, A.D. 1324-5) introduced an infinite variety of new coins of all descriptions, and evidently remodelled the rates, together with the weights of his currency. The gold coinage was raised from 174 to 200 grains, and the silver reduced from the former amount to 140 grains. But his grand effort at finance seems to have been reserved for the production

<sup>1</sup> Inscription of A.D. 387 (A.D. 1191) on the Mosque of the Kaṭh at Dillī; the original reads preferably Dillīāl, but the Tāj ul Miṣār determines the word as دلیوال.

of a scheme of a representative currency (founded on the Chinese paper credit system) in which copper and brass tokens were stamped with an authoritative impress of value, whether as the equivalent of gold or silver; and in addition, parallel representatives of the ordinary subdivisions of each, were issued to complete the currency. This attempt, after producing countless troubles, and resulting in utter failure—even under the guidance of an absolute and unscrupulous tyrant—was abandoned definitively before the expiration of three years from the first promulgation of the ordinance. I need not notice the minor incidents of Muhammad bin Tughlak's mint administration, further than to note a seeming reversion to the previous system of weights in the latter part of his reign. Nor need I more fully advert to the state of the currency under his successors, beyond remarking that Báber seems to have designed to substitute his Central Asian scheme of coinage in place of the then existing local distribution of the currency. However, when Shír Sháh had driven Humáyún out of India (A.D. 949, A.D. 1541) he entered upon a general reform of the coinage, which had the effect of introducing the now universal rupee, and abolishing the unsatisfactory compound of mixed metals; in addition to simplifying the lower coinage, by its reduction to a fixed and determined standard of pure copper,<sup>1</sup> representing the *dám*, which we must suppose had previously been minted in billon.<sup>2</sup>

At length we reach an epoch when we have no longer to depend upon the coins as our only data, but are able to cite written and contemporary authority for the illustration of our subject. Akbar's minister, Abú'l-fazl, has preserved to us a full and complete record of his master's mint arrangements; from this we discover that the authoritative standard of the day was copper, based upon the *dám*, which is defined as "a copper coin, in weight 5 tanks, or 1 tolá, 8 máshas, and 7 ratís, in value the 40th part of a rupee." The text of the '*Ayín-i Akbari*' goes on to declare the weight and value of the gold and silver coins, the equivalents of each being expressed in *dáms*, and their relative exchangeable value *inter se* being for the moment altogether ignored.<sup>3</sup> In this same measure of value all the revenues of the empire are estimated, indeed, it would appear from an incidental notice in connexion with the subject of relative values, that the definition of the worth of

<sup>1</sup> I have estimated this coin at 322.5 grains; pieces now in existence weigh as high as 322 grs. (See '*Numismatic Chronicle*,' xv, 1852.)

<sup>2</sup> "The *dám*," says Abú'l-fazl, "was formerly called *pyash* and also *Bahli*."—Bahli Lodi's mixed coinage contributes isolated specimens that might well represent the requisite value, as tested by present assays; but there is an absence of uniformity in the general results that forbids our recognising any specific class of higher or lower equivalents.

<sup>3</sup> Glahwin's '*Ayín-i Akbari*,' i. p. 37.

gold by any silver estimate, was—like the rupee itself—a novelty.<sup>1</sup> The materials afforded by the text of the 'Ayn-i Akberi,' whether tested by the valuation in dāms, or by the equivalents subsequently given of the rupee correspondents of the several descriptions of mohra, equally establish the result that gold stood to silver as 1 to 9.4. The rupees, it will be seen, were themselves of various standards, ranging from the 89 dāms of the old round rupee, to the 40 dāms of the square jalālī; and, in fact, it is acknowledged in one place that even the estimated rates were uncertain in their application, and that the silver coin was left to find its own level in the market.<sup>2</sup>

I now arrive at the period when British influence is felt upon the currencies of India, and as this is a subject connected with which much misunderstanding and some misrepresentation have taken place, I assure myself from any possible prejudice or favor by permitting the Government to state its own case, in extracts from the legislative enactments promulgated from time to time. The history is unsatisfactory in its earlier portions, and incomplete towards its end, where, it is clear, much remains intentionally untold.

REGULATION XXXV. of 1793.—PREAMBLE.—"A Regulation for re-enacting, with amendments, the Rules passed on the 20th June, 24th October, and 31st November, 1792, and subsequent dates, for the reform of the Gold and Silver Coin in Bengal, Behar, and Orissa; and for prohibiting the currency of any Gold or Silver Coin in those provinces, but the 19th Sun Sica Rupees and the 19th Sun Gold Mohurs."

"Sec. I. . . The sica rupee of the 19th sun is the established silver coin of the country, and the rupee in which the public revenues are payable. It was with a view to render it the general measure of value, that Government determined in the year 1773, that all rupees coined in future should bear the impression of the 19th sun or year of the reign of Shah Alum. . . . "The rules by which the gold coin has been regulated have been productive of evils, similar to those which have prevailed with regard to the silver coin. Under the native administrations, and until the year 1766, the gold mohur was not considered as a legal tender of payment in any public or private transaction, nor was the number of rupees for which it was to pass

<sup>1</sup> When *Azad-al-daulah* "was sent to Kander, Rājā Todarmall made the price of gold mohurs to be estimated in rupees;" L. p. 39. The original Persian text is somewhat obscure in this passage; and the MS. copies vary in the wording of the sentence; but Gladwin seems to have fathomed the real meaning.

<sup>2</sup> "Although the market price is sometimes more or less than 40 dāms, yet this value is always set upon it in comparative calculations."—*Ayn-i Akberi*, i. 36. The original passage is quoted in the body of note <sup>2</sup> p. 5, *supra*.

current ever fixed by the Government. It was struck for the convenience of individuals, and the value of it, in the markets, fluctuated like other commodities: silver being the metal which was the general measure of value throughout the country. In the year 1766, the value of the gold coin, with respect to the silver, was first fixed, and the former coin declared a legal tender of payment. A gold mohur was struck, and ordered to pass for fourteen sicca rupees. But as this coin (calculating according to the relative value of the two metals) was much below the worth of the silver, in the number of rupees for which it was ordered to pass, it was found impossible to render it current, and it was accordingly called in; and a new gold mohur, being that now current, was issued in 1769, which was directed to pass as a legal tender of payment for sixteen sicca rupees. The intrinsic worth of this coin was estimated to be equal to the nominal value of it, or as nearly so as was deemed necessary to render it current at the proscribed rate." [The Regulation then goes on to enumerate the difficulties attendant upon giving free currency to these coins,<sup>1</sup> and proceeds to say.] "The means which appear best calculated

<sup>1</sup> Sir James Stewart, in his work, entitled 'The Principles of Money applied to the present state of the Coin of Bengal' (A.D. 1773), gives us some interesting details as to the aim and object of the original establishment of the gold currency of Bengal, and the want of success that attended the measures of Government, confined to in the above Regulation. He says: "It has been observed, that this coin, called gold mohurs, had been formerly coined at Delhi, of the same weight and fineness with the silver rupees of Bengal and other countries of Hindostan; but that they passed conventionally, having no legal denomination. . . . In 1766, . . . it was proposed, as an expedient for augmenting the currency of specie to make a coinage of gold, . . . and the directors of this operation, pitching upon fifteen Aroot rupees as the value of one gold mohur, instead of estimating the value of these fifteen Aroot rupees by the fine metal contained in them, estimated them by their current value, which was above the proportion of their intrinsic worth. Not satisfied with this first deviation from principles, they added to the mohur (already over-rated in its proportion to the fifteen silver Aroot rupees) no less than 8 per cent. extra-denomination, entirely arbitrary. So when this gold currency came abroad, it proved to be no less than 17½ per cent. worse in payments than silver rupees of Bengal, Madras, Bombay, and Surat," pp. 26, 27.

"The people of that country (Bengal) had been so long accustomed to silver coin, that they never would, except when forced to it, receive the mohurs in payment. So the Company was obliged to make a new regulation in 1769, little better than the former. At last the gold currency fell all together to many per cent. below its intrinsic value, according to the saying, *Idem vultus stultis, etia in contraria currunt*."

Sir J. Stewart, at p. 36 *et seq.*, gives us the weight and standard of these coins:—The 1766 mohur was 26 carats fine, or 20-34ths: full weight, 179-66 grs., proportion of fine gold, 149-72 grains: issued as the equivalent of 14 rupees.

The rupee being 179-69 grs. in full weight, and containing 176-93 grs. of fine silver.

The mohur of 1769, full weight 190-773 grs., contained 190-086 grs. of fine gold: the value being fixed at 16 rupees: the silver currency remaining as before.

Our author continues: "Now if we go upon the supposition we have hitherto adopted, viz., that the proportion of the metals in India was supposed to be at 14 to 1; then in this coinage of 1769, the gold was over-rated nearly 6½ per cent."

to render the gold mohur generally current, are to declare it receivable at all the public treasuries, and in all public payments throughout the provinces, at the rate of sixteen sicca rupees."

Sec. 2. defines weight and standards, or—

"Gold mohurs, 190.894 troy grs. : Assay, compared with English standard gold, better, 1 car.  $3\frac{1}{2}$  grs.

"Sicca rupees,  $179\frac{1}{2}$  grs. : Assay, compared with English standard silver, better, 15 dwts."

Sec. 3. specifies that these gold mohurs "are to be considered a legal tender of payment in all public and private transactions . . . at the rate of sixteen sicca rupees;" and further defines penalties for their refusal by the native Treasurers; and to complete the authoritative currency, it is even declared in Sec. 20, that "no person shall recover in any court of judicature . . . any sum of money, under a bond or other writing, or any agreement, written or verbal, entered into after the above-mentioned date, by which any sum of money shall be stipulated to be paid in any species of rupees, excepting sicca rupees or gold mohurs of the 19th sun, or the halves and quarters of each."

Reg. VI. of 1794 postpones to 10th April, 1794, the operations of Secs. 18, 19, 20, and 23 "as regards the silver coin."

Reg. LIX. of 1794 further postpones the operation of these Rules to 20th April, 1796.

Reg. LXI. of 1795 refers merely to the amount of loss which is to be held to reduce these rupees below the standard.

Regs. I. of 1797, V. of 1801, and XXXVIII. of 1803 relate to exemption from duties of gold and silver coins.

Reg. XLV. of 1803 gives effect to the arrangement for the mintage of Lucknow or Farrakkhabad rupees, of the "same size and form as the 19th sun sicca rupees"; weight and standard to be hereafter determined.

Sec. 25 is, in effect, to the same tenor as Sec. 20 of Reg. XXXV. of 1793, except that gold mohurs are not alluded to; but Sec. 42 explains, that "whereas the gold coin, denominated gold mohurs, has never obtained an extensive circulation in the ceded provinces, in consequence of silver having been the general measure of value in those provinces, from time immemorial; and whereas, during the government of the Nawab Vizir, the value of the gold mohurs in circulation, with relation to the silver coin, was never fixed; and, whereas the coinage of gold mohurs has been long discontinued by the Native Government of the said provinces, as well as the adjacent foreign states; it is not, therefore, judged necessary, at present, to establish a gold coinage in the provinces in question. The gold

mohurs shall be permitted to be circulated in the coded provinces as heretofore, according to the value which individuals receiving and paying the same shall determine; but, gold mohurs shall not be considered to be a legal tender of payment in any public or private transaction, nor shall they bear any fixed rate of value, compared with reference to the silver coin . . . established by this Regulation."

Sec. 43 *et seq.* provides for the copper coinage.

Reg. LIV. of 1803 postpones the operation of Sec. 20, Reg. XXXV. of 1793, to 16th August for the province of Chittagong.

Reg. XII. of 1805, Sec. 13, declares that after a fixed date, "no money will be received in payment of the public revenue (in Cuttack), excepting Calcutta sicca rupees or gold mohurs of the 19th sun."

Sec. 15 extends the penal provisions of Sec. 20, Reg. XXXV. of 1793 to the same province.

Reg. III. of 1806 specifies the weight and standard of the Lucknow sicca rupee, introduced by Reg. XLV. of 1803, viz.: 173 grs. troy. Touch, or parts of fine silver, in 100, 93·5; alloy, 4·5.

Reg. IV. of 1807 refers to rupees alone, and determines the rates at which rupees of sorts shall be received and issued in the coded provinces. Sec. 3 makes the same applicable to Cuttack.

Reg. XIII. of 1807 rescinds the penalties named in Secs. 20 and 21, Reg. XXXV. of 1793, and in parallel sections applicable to local divisions of the country: it being admitted that in many cases, "the penalty of non-recovery by judicial process is not only a hardship to the individual, but is repugnant to the ends of justice."

Reg. II. of 1812 defines duties on the coinage of bullion.

Secs. 10 and 11 specify the weight and value of the Benares rupee as 175 grs. troy. Touch, or pure silver, 168·875; alloy, 6·125.

Reg. XVII. of 1817, Secs. 9, 10, and 11 prescribe punishments for counterfeiting, debasing, etc.

Reg. XIV. of 1818.—The preamble states, "The high standards established for the gold mohur and sicca rupee, having been found productive of many inconveniences, both to individuals and the public, . . . [but] as a reduction in the value of the sicca rupee, from its being in a great measure the money of account, both in private and public transactions, would necessarily change the terms of all existing contracts, and might be productive of embarrassment and trouble, it has been determined to leave the rupee unaltered in this respect; and the new Calcutta sicca rupee will consequently contain the same quantity of fine silver as that heretofore struck, and, being of the same intrinsic value, will circulate on the same terms. The mint proportions of silver and gold, being, it is believed, inaccurately estimated at present, and it being also desirable that an uniformity in this



respect should be introduced at the three Presidencies of Calcutta, Madras, and Bombay, it has been thought advisable to make a slight deduction in the intrinsic value of the gold mohur to be coined at this Presidency, in order to raise the value of fine gold to fine silver, from the present rates of 1 to 14·861 to that of 1 to 15. The gold mohur will still continue to pass current at the rate of sixteen rupees. For the purposes and objects above enumerated" it is enacted, etc.

Sec. 1, par. 2nd—"The weight and standard of the Calcutta sicca rupee and gold mohur . . . shall be as follows":—

Gold mohur	... weight 201·710 grs.	... fine gold 187·651	... alloy 17·059
Sicca rupee	... weight 191·916 grs.	... fine silver 175·923	... alloy 16·993

REG. V. of 1819 refers to mint and bullion details.

REG. XI. of 1819 discontinues the coinage of the Benares rupee, and limits "the legal currencies in the territories subordinate" to Bengal "to two, namely the Calcutta and Furruckabad rupee." The latter is specified at—Weight, 180·234 grs.; pure silver, 165·215; alloy, 15·019 = 11·12ths pure and 1·12th alloy.

Sec. 10 secures an equitable arrangement for bonds, etc., "not expressed in Furruckabad rupees."

REG. V. of 1821 regulates the rates at which Benares and Furruckabad rupees shall be received in payment of revenue.

<sup>1</sup> To exemplify how Governments keep their own laws, I extract from 'Allen's Indian Mail' of 1854, a statement of manifest authenticity regarding certain mint operations sanctioned during the continued currency of this Regulation:—"The market of Calcutta has invariably exhibited a great difference of price between the pure gold mohurs of old standard and those of the new one-twelfth alloy standard. For seven years—that is, from 1815 to 1822—the Calcutta mint coined nothing but new-standard gold mohurs; but in 1823-24, the Government having had a large receipt of gold from the Burmah, and having obtained also a considerable remittance of gold from Madras, consequent upon the substitution of rupees for pagodas in the currency of that presidency, this Government gold was, for the sake of the profit, coined into gold mohurs of the old standard.—Regulation XIV. of 1816 prescribing one-twelfth alloy for the Calcutta gold, notwithstanding. There were above four lacs of old gold pieces struck in the Mint, and sold at the general Treasury at the price of the day. But it was only in 1829 that a similar privilege was conceded to private bullion-merchants. The consequence, however, of conceding to them the privilege of obtaining coin of the old standard was, that in the six years from the date when it commenced to 1835, when the new Act took the privilege away, nearly as much private gold bullion was brought to be coined as in the eleven preceding years: and when the privilege was taken away, there was a very limited coinage of the new gold coin, and that coinage was principally of Government gold."—After the passing of the Act of 1835, the mint speculations would seem to have been less successful; at least, if we are to credit the following, which is affirmed under similar authority with the passages just quoted:—"The difference of price even of unstamped pure gold, as compared with stamped one-twelfth alloy coin was such, that the Mint Committee of Calcutta, in the year 1836, applied to Government, and obtained leave to sell the Government bullion in its possession instead of coining it. The calculation of profit was based on a comparison, not with the par fixed for receipts into the Government treasury (viz. fifteen of silver for one of gold), but with the price at which the same gold would sell as a coin; showing evidently that our stamp gave no additional value, but the contrary."



Res. II. of 1824 abolishes the mint at Furruckabad.

Res. VII. of 1833 alters the weight of the new Furruckabad rupee, and assimilates it to the legal currency of the Madras and Bombay Presidencies, and adjusts the weight of Calcutta sicca rupees thus:—

Calcutta sicca rupee	...	weight 192 gra.	...	fine 176	...	alloy 16
Furruckabad rupee	...	weight 180 gra.	...	fine 165	...	alloy 15

The tola or sicca weight 180 gra., introduced (as stated in detail at p. 7, *supra*).

Act XVII of 1835, Sec. 7 declares, "and be it enacted, that the under-mentioned gold coins only shall henceforth be coined at the mints within the territories of the East India Company:—

1st.—A gold mohur or fifteen rupee piece of the weight of 180 gra. troy, and of the following standard, viz.: 11-12ths, or 165 gra., of pure gold; 1-12th, or 15 gra. of alloy": with proportionate subdivisions.

Sec. 8 defines the devices these coins are to bear.

Sec. 9. "And be it enacted, that no gold coin shall henceforward be a legal tender of payment in any of the territories of the East India Company." (Passed 17th August, 1835).

Act XXI. of 1835 defines the weight and value of the copper currency, in the Presidency of Bengal, as follows:—

"1.—Pice, weighing 100 gra. troy.

"2.—A double-pice, 200 gra. troy.

"3.—A pie, or 1-12th of an anna piece, 33½ gra."

Sec. 2 enacts that "the said pice shall be a legal tender for 1-64th of the Company's rupee, and the said double-pice for 1-32d of the Company's rupee, and the said pie for 1-192d of the Company's rupee." (Passed 7th December, 1835).

Act XIII. of 1836 directs that the Calcutta sicca rupee shall cease to be a legal tender from the 1st January, 1838; but shall be received at public Treasuries by weight, subject to one pie for re-coinage: and further limits the circulation of certain local copper coins.

Act XXXI. of 1837 merely refers to devices.

Act XXI. of 1838 authorises the "coinage and issuing of any silver coins of a value represented in even annas, or sixteenths of the

<sup>1</sup> As there are no Preambles to the Acts, we are left to discover the reasons which led to this abrupt announcement. 'The Minutes of Consultation in Council' might perhaps disclose the guiding motive. In this instance, however, silence need not be taken for discreet reticence, for many good and valid reasons suggest themselves as warranting the course pursued. And in regard to the new aspect that the gold discoveries have since given to the comparative values of the precious metals, it is to be remembered that at the moment of the passing of this Act, gold stood relatively to silver at over 15 to 1 in the local markets.

Company's rupee," of the same standard as the higher denominations.

Act XXXI. of 1839 prescribes punishment "for drilling, defacing, or debasing current coin," etc.

Act XIII. of 1844 is an Act for the withdrawal from circulation of the *Trisooloe pyce* in the province of Benares.

Act XXII. of 1844 merely extends Act XXI. of 1835 to all "the territories of the East India Company."

Act VI. of 1847 refers to the copper currency of the Straits Settlements.

To complete the series of Government documents, I append to the more formal legislative enactments, the substance of the notification of the 22nd of December, 1852; which, in its opening paragraph, likewise sufficiently explains the nature of the intermediate order of 1841.<sup>1</sup>

"No. 26. **FORT WILLIAM, FINANCIAL DEPARTMENT, 22ND DECEMBER, 1852.**—NOTIFICATION.—By Sec. 9, Act XVII. of 1835 of the Government of India, it was enacted, that thenceforward no gold coin should be a legal tender of payment in any of the Territories of the East India Company; and, accordingly, gold ceased from the date of the passing of the Act to be a legal tender of payment in the Company's Territories in India."

"But, by a Proclamation issued on the 13th January, 1841, officers in charge of public treasuries were authorized freely to receive gold coins, struck in conformity with the provisions of the same Act XVII. of 1835, at the rates indicated by the denomination of the pieces, until they should have passed certain limits of lightness, set forth in a table published with the Proclamation, or until further orders; and gold coins have been thus received in liquidation of public demands up to the present date."

"Notice is now given . . . that on and after that date [1st January, 1853,] no gold coin will be received on account of payments due, or in any way to be made to the Government<sup>2</sup> . . .

<sup>1</sup> I have not failed to examine this Proclamation. It specifies the devices (*Reverse*: "A lion and a palm-tree") for the new gold coinage, "in conformity with Act XVII. of 1835"; and proceeds: "officers in charge of public treasuries are hereby authorized freely to receive these gold coins at the rates, until further orders, respectively denoted by the denomination of the pieces, until they shall have passed the limits of lightness allowed for wear, laid down in the annexed table, when they will only be receivable as bullion, and be subject to a deduction of one per cent. for seigniorage."

<sup>2</sup> I do not ordinarily permit myself to criticise the acts of the Government of India; but these orders seem fairly to demand a passing notice. Viewing the peculiar element of suspicion of motives so strong in Asiatic minds, and the importance the natives of India attach to every varying phase of the dealings of their rulers, it is clear that the "Proclamation" of 1841 was neither wise nor politic; it is doubtful whether, under the circumstances, it was just. The reservation of "until further orders," so clumsily inserted in the Proclamation of 1841, might convey its special meaning to the ear of an English lawyer, but it is not likely to

Gold will continue as heretofore, to be received into any of the mints  
 . . . for coinage, under the Act and Rules at present in force for  
 the coinage of gold, but Mint certificates for gold coins will be dis-  
 charged in gold only, and no such certificate for gold will be accepted  
 in any public treasury in liquidation of public demands, or on account  
 of any payment to the Government whatever."<sup>1</sup>

The Madras and Bombay Governments seem to have pertinaciously  
 abstained from legislating on coinages and currencies, and their  
 Statute Books are altogether silent on these subjects, until the action  
 of the Supreme Government is brought to bear on them in 1835.  
 Such being the case, I am unable to elucidate the measures of Mint  
 progress in the minor Presidencies.

have borne its full significance to the intelligence of the Native banker: apart from  
 this, it is clearly a question whether the *tenor* of the Proclamation itself did not  
 imply an understood obligation on the part of Government, to receive back the gold  
 coined and issued under its provisions, coupled as those provisions were with the  
 inducements held out to aid the circulation, that the officers of Government were  
 enjoined "freely to receive these gold coins at the rate" etc.; the only obvious  
 restriction, beyond the formal "until further orders," being that the pieces should  
 not have "passed the limits of lightness allowed for wear" etc.

<sup>1</sup> The same writer in '*Allen's Indian Mail*,' 1851, who clearly has had access to  
 official documents, thus elucidates the motive and object of the Order of 1852:—"We  
 have explained the condition of the gold coin of India, and the erroneous principles  
 adopted for its manufacture. Things continued in this state when the gold of  
 California and Australia began to affect the market, and to change the relative value  
 of that metal to silver. The first considerable increase in the import of gold at  
 Calcutta was in the year 1848-49, and a large portion of it was sent to the mint, in  
 that and the following years, for conversion into low-standard lion-device pieces,  
 [XVII. of 1835]. The sending of gold to the mint at this period was in reality a  
 mere sale of the metal to Government for silver, at the par rate of 15 to 1, which  
 then began to prevail as the market rate. The Mint certificates, obtained for gold  
 delivered, were immediately paid in at that par, in satisfaction of Government dues,  
 or were negotiated at the banks, where silver was always claimed upon them under  
 the option then given of receiving the amount in rupees at the par in question.  
 The gold thus, when coined by the Mint, remained as a dead balance in the Govern-  
 ment treasury, not being issuable at the par of 15 to 1, in the condition of base  
 standard coin, to which it had been manufactured. Besides this process of gold  
 accumulation through deliveries at the Calcutta Mint, low standard coin, previously  
 issued, began also to be paid into the treasury, at the established par rate in ordinary  
 transactions [under the Proclamation of 1841]; so that out of a total amount  
 of lion-device gold mohurs, not exceeding in value seventy lacs of rupees, which  
 was the value of the coinage up to that date, as before shown, more than fifty  
 lacs were, in 1852, in deposit in the Government treasury as a dead unconvertible  
 balance. It was at this time that the Government of India began to contemplate  
 measures for converting its entire 5 per cent. Debt into Stocks at 4 per cent. The  
 prospect, therefore, of having the balance to which the Government looked for the  
 means of completing this operation rendered unconvertible for the purpose by the  
 substitution of gold coin, not a legal tender, for the rupees claimable by the public  
 creditors who might elect to receive payment in cash, was by no means agreeable.  
 A prompt remedy was necessary, and the question being referred to the Court of  
 Directors, the desire to adhere still to their old principles suggested that the  
 low standard gold coin, not being a legal tender, the receipt of it by Government  
 should be altogether stopped; and this was accordingly done in 1853, by public  
 notice in the *Gazette* of Calcutta."

Having completed this summary review of the gold and silver coinages, I now revert to Prinsep's Tables.<sup>1</sup>—E.T.]

TABLE of the Coinages issued from the Calcutta Mint from 1801-2 to 1832-33.

Official Year.	Government and Individuals.								Total sikkā rupees.				
	Gold.				Silver.								
	Rs.	As.	P.	S.	Rs.	As.	P.	S.		Rs.	As.	P.	S.
1801-2	83,139	12	0		30,73,228	12	0			31,56,358	8	0	
1803-3	1,37,848	0	0		46,64,758	8	0			47,02,586	8	0	
1803-4	89,496	8	0		77,41,674	4	0			78,31,170	12	0	
1804-5	1,26,946	0	0		1,00,78,000	12	0			1,02,05,000	12	0	
1805-6	1,30,454	0	0		71,20,322	12	0			72,50,776	12	0	
1806-7	91,773	8	0		1,63,14,108	12	0			1,64,05,977	4	0	
1807-8	2,51,752	4	0		1,45,86,128	8	0			1,48,11,878	4	0	
1808-9	30,800	12	0		1,11,30,280	4	0			1,11,81,181	0	0	
1809-10	31,843	8	0		87,76,886	0	0			83,08,771	8	0	
1810-11	10,29,654	0	0		1,63,81,865	0	2			1,76,11,521	0	2	
1811-12	18,54,703	9	1		63,83,682	12	1			1,02,38,589	5	5	
1812-13	12,56,319	0	0		78,51,946	10	0			91,07,865	10	0	
1813-14	10,91,353	12	8		38,31,166	11	11			39,23,030	8	7	
1814-15	14,61,964	14	8		71,20,817	15	1			86,31,792	12	0	
1815-16	9,36,987	4	0		1,30,76,463	6	5			1,40,12,450	0	5	
1816-17	13,62,290	14	6		3,21,48,114	5	6			2,35,11,315	4	2	
1817-18	15,67,279	9	4		55,15,413	7	8			70,82,691	1	0	
1818-19	3,63,165	6	8		1,66,40,347	3	7			1,70,03,353	9	3	
1819-20	5,37,679	9	4		2,63,46,438	13	3			2,68,84,109	6	7	
1820-21	8,26,046	0	0		7,08,26,215	6	11			1,16,62,261	6	11	
1821-22	4,26,331	13	4		74,68,094	4	5			78,05,028	1	9	
1822-23	2,79,211	6	8		68,63,391	7	8			71,31,693	14	4	
1823-24	1,26,309	0	0		49,48,561	6	5			50,76,073	0	5	
1824-25	29,72,944	6	8		69,66,557	2	9			90,39,505	8	11	
1825-26	23,65,029	5	4		97,19,099	15	1			1,30,44,114	4	5	
1826-27	34,26,803	0	0		89,87,615	0	0			1,15,24,447	0	0	
1827-28	4,79,614	0	0		66,69,143	15	0			71,48,765	15	0	
1828-29	5,61,296	0	0		57,00,840	2	11			62,62,136	2	11	
1829-30	10,24,092	0	0		83,95,884	11	5			94,19,516	11	5	
1830-31	17,58,896	0	0		38,13,496	7	8			55,72,392	7	8	
1831-32	18,39,392	0	0		44,77,723	14	4			63,17,114	14	4	
1832-33	23,71,024	0	0		76,96,479	18	8			1,00,61,503	18	8	
	3,18,62,966	4	8		39,19,76,375	1	5			32,38,33,361	0	1	
COPPER COINAGE.													
From 1801 to 1812 .....	10,69,179	5	6										
1813 to 1825-30 .....	5,87,765	6	6										
1826-27 to 1832-33 .....	16,11,461	1	5										
										32,98,416	13	5	
Total sikkā rupees.....										33,71,31,778	3	6	

<sup>1</sup> [I had designed, as I intimated in a note p. 41, to have omitted all the details of the working of the Indian Mints. However, as I have since found reason to believe that a general return of the currencies issued by the East India Company would possess an interest with European readers, I have determined to abbreviate the redundances of Prinsep's forms, and endeavoured to compile the several statements, as far as possible, from documents in the East India House, which have been most liberally placed at my disposition by Col. Sykes.]

TABLE of Silver Coinage in the Provincial Mints.

	Bengal.	Farrukhabad.	Sagar.
From 1804-5 to 1832-3, incl.	11,14,79,398 5 8	7,74,86,519 3 11	53,90,282 8 6
Of which was private bullion...	6,87,85,549 12 8	2,10,18,009 10 5	7,89,496 2 4
Government ditto .....	4,46,94,348 8 10	4,64,68,000 9 6	46,00,786 6 2
Value of copper coinage up to the same period. ....	12,60,140 0 0	75,594 12 8	2,82,388 0 0
Total	11,28,70,038 6 6	7,75,42,114 0 2	56,82,670 8 6

Coinage at the Calcutta Mint .....	Sikkā Rs.	33,71,31,778
Coinage at Benares .....	"	10,88,15,065
Coinage at Farrukhabad .....	"	7,26,98,732
Coinage at Sagar .....	"	58,27,503
Total Coinage of the Bengal Presidency from 1801-22: Sikkā Rs.		52,00,70,876

[It will be seen that the totals in the preceding Tables are given in sikkā and in Farrukhabad rupees. Act XVII. of 1835 introduced the Company's rupee as the one uniform currency of all India; this coin is composed of 165 grains of silver and 15 of alloy, and stands the declared equivalent of the old Bombay, Madras, Farrukhabad, and Sonāt rupees—being defined as corresponding in value to  $\frac{1}{100}$  of the superseded Calcutta sikkā rupee. All Government accounts, subsequent to the date of the passing of this Act, are therefore made up in the new or standard Company's rupee.

TABLE of the value of Gold and Silver Coined in the Mints of Calcutta, Madras, and Bombay in each year from 1833-34 to 1854-55.  
(From Official Returns at the India House.)

	CALCUTTA.		MADRAS.		BOMBAY.		TOTAL.	
	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.
	Value in Co.'s Rs.	Value in Co.'s Rs.	Value in Co.'s Rs.	Value in Co.'s Rs.	Value in Co.'s Rs.	Value in Co.'s Rs.	Value in Co.'s Rs.	Value in Co.'s Rs.
1833-34	26,48,530	1,23,47,561	29,58,800	43,11,580	...	10,35,156	66,67,800	1,77,42,317
1834-35	16,54,838	1,53,10,052	28,70,200	35,51,000	...	54,78,286	45,60,038	2,19,00,341
1835-36	11,97,344	1,62,40,900	...	...	...	64,34,764	11,97,344	2,20,84,724
1836-37	88,145	3,98,14,302	The operations of the Mint were suspended from 1836 to 1842.		...	62,71,827	68,145	3,90,80,170
1837-38	3,54,365	2,69,34,103			...	1,09,48,036	2,54,205	3,18,82,730
1838-39	8,44,706	2,67,68,743			...	1,17,72,822	3,44,706	3,65,36,565
1839-40	7,91,557	2,15,77,478			...	98,58,301	7,91,557	3,14,06,477
1840-41	5,67,720	1,64,19,686	...	...	...	1,20,34,236	5,67,720	2,54,48,923
1841-42	3,31,915	2,51,28,512	...	25,85,978	...	51,75,329	2,31,015	3,28,67,019
1842-43	...	2,06,11,964	...	16,40,303	...	1,97,35,678	...	3,90,47,735
1843-44	1,06,335	2,17,66,075	...	42,28,459	...	2,07,32,437	1,06,335	4,07,37,031
1844-45	1,79,760	2,53,38,602	83,605	51,72,430	...	1,54,00,180	2,63,355	4,69,68,212
1845-46	1,24,535	2,25,89,332	1,00,545	21,32,281	36,300	1,36,00,807	2,91,470	3,84,25,430
1846-47	4,27,335	1,64,78,122	...	60,84,916	...	66,40,956	4,27,335	2,92,09,094
1847-48	1,63,930	1,01,19,958	3,00,000	34,95,301	...	62,67,359	4,62,930	1,78,22,598
1848-49	7,04,700	1,33,03,269	...	12,95,676	...	1,11,95,701	7,04,700	3,57,92,616
1849-50	3,24,525	1,33,97,117	...	8,64,872	15,500	96,50,554	3,29,825	2,41,12,043
1850-51	12,17,830	1,31,31,097	...	13,64,271	19,350	1,20,78,906	12,37,170	2,61,64,274
1851-52	6,25,000	1,78,80,191	...	30,37,686	...	2,08,97,340	6,25,000	4,24,05,222
1852-53	...	2,73,66,206	...	39,35,171	...	2,37,98,471	...	5,50,90,848
1853-54	14,56,785	2,31,82,703	...	67,50,840	...	2,58,00,817	14,56,785	5,25,34,305
1854-55	36,700	70,43,170	...	28,69,420	...	67,47,416	20,700	1,30,59,015
	1,32,35,108	41,68,81,283	73,18,140	5,35,68,015	71,040	54,08,50,238	2,06,24,348	71,55,39,286

TABLE of Imports and Exports of Treasure (Gold and Silver) in each of the Provinces of India, from 1813-14 to 1853-54, at 2s. 6d. the Rupee.

YEAR.	BENGAL.				MADRAS.				BOMBAY.				TOTAL.			
	Imports.	Exports.	Net Import.	Net Bal.	Imports.	Exports.	Net Import.	Net Bal.	Imports.	Exports.	Net Import.	Net Bal.	Imports.	Exports.	Net Import.	Net Bal.
1813-14	681,808	4,275	580,128	580,128	132,133	50,255	82,878	82,878	207,422	181,015	26,407	26,407	931,368	216,024	715,364	715,364
1814-15	1,095,043	15,802	1,079,241	1,079,241	100,897	10,061	90,836	90,836	257,179	65,108	192,071	192,071	1,493,711	280,994	1,212,717	1,212,717
1815-16	1,295,013	1,275	1,293,738	1,293,738	111,201	10,255	100,946	100,946	601,758	7,743	594,015	594,015	1,895,711	280,994	1,614,717	1,614,717
1816-17	8,385,108	10,000	8,375,108	8,375,108	17,037	2,116	14,921	14,921	801,274	4,216	797,058	797,058	1,000,000	45,000	955,000	955,000
1817-18	8,385,108	31,725	8,353,383	8,353,383	17,037	4,577	12,460	12,460	1,100,000	35,417	1,064,583	1,064,583	4,216,000	62,719	4,153,281	4,153,281
1818-19	4,719,210	27,093	4,692,117	4,692,117	17,037	9,025	8,012	8,012	1,531,000	8,703	1,522,297	1,522,297	5,788,000	62,719	5,725,281	5,725,281
1819-20	4,415,102	300,902	4,114,200	4,114,200	100,000	15,000	85,000	85,000	265,000	67,000	198,000	198,000	4,501,100	300,459	4,200,641	4,200,641
1820-21	2,813,729	2,517,798	295,931	295,931	259,546	1,005	258,541	258,541	670,281	49,021	621,260	621,260	3,771,201	101,285	3,670,000	3,670,000
1821-22	2,115,453	1,005,814	1,109,639	1,109,639	259,546	10,000	249,546	249,546	670,281	49,021	621,260	621,260	3,771,201	101,285	3,670,000	3,670,000
1822-23	2,701,845	1,005	2,700,840	2,700,840	112,173	13,501	98,672	98,672	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1823-24	2,200,610	730,582	1,469,028	1,469,028	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1824-25	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1825-26	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1826-27	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1827-28	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1828-29	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1829-30	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1830-31	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1831-32	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1832-33	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1833-34	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1834-35	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1835-36	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1836-37	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1837-38	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1838-39	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1839-40	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1840-41	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1841-42	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1842-43	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1843-44	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1844-45	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1845-46	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1846-47	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1847-48	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1848-49	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1849-50	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1850-51	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1851-52	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1852-53	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000
1853-54	1,001,214	100,000	901,214	901,214	101,000	70,000	31,000	31,000	609,503	20,000	589,503	589,503	2,500,000	55,000	2,445,000	2,445,000



The figures entered in the preceding Official Return, so far as they relate to the commerce of Bengal from 1813-14 to 1832-33, will be found to differ from those originally published by Prinsep. It may be necessary to explain, that his Tables exhibited the imports and exports of the isolated Presidency of Bengal, and, as such, comprehended not only the trade with the United Kingdom and foreign countries, but likewise the traffic of the Port of Calcutta, etc., with the coast and the other Presidencies. In the present return, the local port to port trade is properly excluded.<sup>1</sup>

It will be seen that the foregoing Table does not discriminate the relative amount of gold and silver imported or exported in each year, nor do the official documents at command admit of the separation of the two items earlier than 1846-47; subsequent to which, the proportion runs as follows, for the three Presidencies:—

	GOLD.			SILVER.		
	Imports.	Exports.	Balance.	Imports.	Exports.	Balance.
	£	£	£	£	£	£
1846-47	851,738	2,499	+ 849,239	2,086,183	710,078	+ 1,376,105
1847-48	1,048,778	9,661	+ 1,039,117	224,612	1,416,876	- 492,264
1848-49	1,401,748	59,829	+ 1,341,919	2,802,755	2,486,913	+ 315,842
1849-50	1,180,661	64,808	+ 1,095,853	2,256,146	906,374	+ 1,349,772
1850-51	1,155,310	2,016	+ 1,153,294	2,686,498	839,273	+ 1,847,225
1851-52	1,338,778	71,155	+ 1,267,623	3,718,266	847,923	+ 2,870,343
1852-53	1,335,164	168,803	+ 1,166,361	5,490,214	888,424	+ 4,601,790
1853-54	1,101,130	17,245	+ 1,083,885	3,770,821	1,460,090	+ 2,310,731
	9,393,213	349,499	9,043,714	23,688,509	9,260,291	14,428,218

The proportions of each metal absorbed by the several divisions of

<sup>1</sup> [The delay that has occurred in the printing of this sheet enables me to add parallel returns for the year 1854-55. The Madras and Bombay totals heretofore subjoined are derived from official sources; the Bengal return is taken from Bunsud's 'Commercial Annual,' as the formal statements relating to that Presidency have not yet been received at the India House:—

	IMPORTS.	EXPORTS.	NET IMPORT AND EXPORTS.	
			Net Imports.	Net Exports.
	£	£	£	£
Bengal.....	603,154	1,072,194	.....	469,040
Madras.....	134,221	321,814	.....	327,693
Bombay.....	1,184,913	253,654	836,259	.....
Total.....	1,946,288	1,647,662	38,626	.....

<sup>2</sup> [The unimportant discrepancies that may be detected between the lower figures of these totals and those entered at the end of the Table in page 52 and elsewhere, are explained to have arisen from the varying results of working in gross and in detail, and the exclusion of fractions of rupees and the rejection of unit figures, to convert the rupee into sterling money at different stages of the arithmetical process.]



the Indian empire, during the eight years in question, are embodied in the annexed table:—

YEARS.	CALCUTTA.		MADRAS.		BOMBAY.	
	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.
	£	£	£	£	£	£
1846-47	215,539	+ 835,294	27,501	+ 51,469	605,757	490,442
1847-48	362,534	— 520,492	48,558	— 130,667	628,005	159,305
1848-49	415,947	+ 216,097	33,173	— 649,826	899,799	740,571
1849-50	275,545	+ 685,117	55,091	— 6,291	765,169	760,946
1850-51	317,998	+ 585,354	35,868	+ 193,097	805,428	1,398,974
1851-52	401,242	+ 1,654,639	76,069	+ 5,581	790,301	1,205,157
1852-53	575,331	+ 2,342,361	49,121	+ 491,343	541,887	1,776,176
1853-54	481,736	+ 1,166,317	56,719	+ 375,115	515,395	763,859
£	3,045,922	+ 6,874,417	409,160	+ 259,811	5,548,732	7,293,930

In appropriate supplement to these Tables, and to enable my readers to judge of the comparative importance of the bullion traffic with India, I annex a statement from Col. Sykes' paper 'On the External Commerce of British India,' published in the 'Journal of the Statistical Society,' for June, 1856, and further brought up to the present date, which exhibits the relative values of goods and bullion imported and exported during the six years from 1849-50 to 1854-55.

*Abstract of Imports and Exports of Goods and Bullion from 1849-50 to 1854-55.<sup>1</sup>*

Years ended 30th April.	Total amount of goods imported into the three Presidencies.	Total amount of goods imported into the three Presidencies.	Exports of Goods.	Net Import of Bullion.	Exports of Goods, deducting Net Import of Bullion.	Bills drawn upon India by the Government.	Final Balance of Trade in favour of India adjusted by other sources.
	£	£	£	£	£	£	£
1849-50	10,300,000	17,312,000	7,012,000	2,425,000	4,587,000	2,036,000	1,651,000
1850-51	11,559,000	18,164,000	6,605,000	2,270,000	2,335,000	2,236,000	99,000
1851-52	12,240,000	19,879,000	7,630,000	4,133,000	2,506,000	2,777,000	729,000
1852-53	10,071,000	20,465,999	10,394,999	5,779,000	4,618,000	3,317,000	1,301,000
1853-54	11,192,000	19,295,000	8,173,000	3,399,000	4,793,000	3,650,000	934,000
1854-55	12,442,000	18,228,000	5,826,000	38,000	5,819,000	2,660,000	2,149,000
Total...	67,734,000	112,443,000	45,679,000	19,931,000	26,848,000	19,782,000	6,863,000
Average	11,289,000	18,902,000	7,613,000	3,171,000	4,441,000	3,297,000	1,143,000

The final column for the year 1854-55 is taken from Beaumont's 'Commercial Annual,' as the official papers have not yet been received from the Government.

As the statements in the above Table are understood to have been

<sup>1</sup> [Mr. Lowe's Circulars furnish us with the actual shipments of treasure for India

prepared from official Custom-House returns, they may be accepted as *pro-tanto* authentic; and as the Government of the East India Company adhere to the highly primitive system of levying duties upon exports, the totals thus obtained are probably as trustworthy as the corresponding entries of imports.

As intimately connected with the subject of the demand for silver bullion in India, I also append a full return of the responsibilities undertaken by the East India Company on account of railways in course of construction. I have not been able to obtain exact statements of the several amounts actually expended in India—comprising the sums repaid by the Government in silver coin in return for the gold deposited in the treasury in Leadenhall Street—but the difference between the totals “paid in” and “re-issued in England” will furnish an approximate estimate of what the liability amounts to.

by the Peninsular and Oriental Company's vessels, during the years 1855, 1856, and 1857, amounting to the following totals—

1855.			
	GROSS RECEIPTS. January to December.		NETT PROCS. (12 months).
Calcutta.....	Gold, £ 320	Silver, £ 2,293,225	Silver, £ 608,141
Madras.....	“ 17,780	“ 177,472	“ 289,014
Bombay.....	“ 7,982	“ 3,267,490	“ 51,344
	£ 19,371	£ 4,248,899	£ 943,499

The grand total shipped for the East in 1855 was—From the United Kingdom: Gold, £948,272; Silver, £9,460,989. Other Ports: Gold, £242,239; Silver, £1,524,240.

1856.			
	GROSS RECEIPTS.		NETT PROCS. January Dec. 31st.
Calcutta.....	Gold, £ 719	Silver, £ 3,417,001	Silver, £ 433,302
Madras.....	“ 28,423	“ 213,791	“ 397,491
Bombay.....	“ 7,985	“ 4,748,631	“ 163,216
	£ 37,147	£ 8,379,503	£ 924,914

Total exports for the East from the United Kingdom for 1856: Gold, £40,749; Silver, £12,118,985. Other Ports: Gold, £74,639; Silver, £1,989,016.

1857.			
	GROSS RECEIPTS.		NETT PROCS.
Calcutta...Gold, £ 30,040	Silver, £ 3,689,015	Gold, £30,898	Silver, £ 809,407
Madras... “ 97,788	“ 463,646	“ 10,300	“ 460,710
Bombay... “ 30,565	“ 5,374,950	“ 16,161	“ 523,560
	£ 164,393	£ 11,368,611	£ 62,557
			£ 1,888,078

Total exports for the East from the United Kingdom: Gold, £268,275; Silver, £16,795,235. Other Ports: Gold, £259,986; Silver, £2,350,689.

\* There were no shipments for value of the above Treasury in January, and only £20,000 for Bombay in February, 1857.

It may be necessary to add that the payments into the Company's Treasury on account of Railways commenced in 1848-49, and that the rate of exchange for Indian subscribers was permanently fixed at 1s. 10d. per Company's rupee.<sup>1</sup>

TABLE exhibiting the sums paid into the East India Company's Treasury, in London, on account of Railways in India, up to 30th Sept., 1856.

Names of Companies.	Capital subscribed.	Total paid in.	Re-taken in England.
	£	£	£
East Indian.....	10,731,000	8,219,723	3,094,126
Great Indian Peninsula.....	4,000,000	2,525,113	866,263
Madras.....	4,000,000	1,326,354	1,027,505
Sind.....	500,000	363,614	92,480
Bombay and Baroda.....	500,000	534,611	58,891
	19,731,000	11,371,325	5,139,565 *

\* Of this total the sum of £ 869,301 has been disbursed as Interest on Capital.

Another important item bearing upon these details still remains to be noticed—that of the comparative value of the uncurrent silver coin received into the mint, as contrasted with the amount of bullion

<sup>1</sup> [The rate of exchange thus permanently established, irrespective of intrinsic value or any possible scheme of commercial par, has necessarily had the effect of insuring that nearly all the funds required for railways should be raised in England to the exclusion of Indian subscribers. The second Table at page 14 will indicate the intrinsic value of the Company's rupee, and its details will exemplify how the exchangeable value of that coin is liable to be affected by external influences; but, under ordinary circumstances, the par value may be fairly taken at 1s.; now, under this permanent and immutable arrangement, whatever the commercial rate of exchange might chance to rise at, Indian contributors to their own local railways had to pay 218 Company's rupees for every £20 share, or about 8 per cent. more than the nominal value of the stock, while under favorable rates of exchange, such as we have experienced of late, by remitting the money to England, the £20 share could be purchased for about 184 Company's rupees, making a total difference of no less than 17 per cent! In a similar degree have our Eastern speculators reason to complain of the comparative rates of interest; for while the Home Government was undertaking these millions of railway debts, and guaranteeing a minimum rate of profit at 5, and never less than 4½ per cent., the Government of India was endeavouring to persuade its obedient subjects that 4, and even 3½ per cent. (28th October, 1852) was quite as much as their money was worth; and the latter rate was not to form an ascending minimum like the railway guarantee, but a maximum, liable, on the contrary, to reduction at any favorable moment, after the manner of the extinguishment of the 5 per cents. in 1853 and their conversion into *jeans*, the consentient holders of which were startled by the opening of a new loan at the former rate, in less than fourteen months after the completion of this—to use the words of the Governor-General—"not the less successful" operation. To sum up these contrasts, it is necessary to bear in mind the relative value of money in the two countries; which may be justly tested by the index until lately afforded by the legal rate of interest in each—that of India being 12, while that of England was 5 per cent.]

brought for coinage by individuals unconnected with the State :<sup>1</sup> the one indicating the amount of the old currency replaced by new coin, the other disclosing the increase made to the circulating medium; though this latter is liable to be affected by too many varying influences to be received as any criterion of the total permanently available to meet the monetary wants of the country.

I limit the present returns to the rupee or standard currency;<sup>2</sup> commencing with those of the year 1833-34, in order to embrace the entire period comprised in the parallel Table at page 81.

<sup>1</sup> [Notwithstanding his remark on the subject at page 41, Prinsep omitted to discriminate in his Table of the Coinages of the Calcutta Mint the separate amounts derived from each source. In the returns of the Provincial Mints (page 81) the difference is duly marked.]

<sup>2</sup> [The coinage of gold may be gathered, from the previous Tables, to have been in proportion to that of silver :

In the Calcutta Mint, from 1861-2 to 1832-33 as 2.18 to 26.19			
from 1833-34 to 1854-55 as 1.32 to 41.68			
Madras	from 1833-34 to 1854-55 as	.75	to 5.25
Bombay	from 1833-34 to 1854-55 as	.007	to 24.

No gold was coined in the European mints of the North-Western Provinces.]

*Assay produce of Silver Bullion received into the Mints of Calcutta, Madras, and Bombay, in each year from 1833-34 to 1854-55; and of the value of the Silver Coinsages for the same period.*

	CALCUTTA MINT.			MADRAS MINT.			BOMBAY MINT.		
	Amount realised of silver received from individuals.	Treasury bullion (gold) received from Treasury officers.	Silver Coinsage.	Amount realised of silver received from individuals.	Treasury bullion (gold) received from Treasury officers.	Silver Coinsage.	Amount realised of silver received from individuals.	Treasury bullion (gold) received from Treasury officers.	Silver Coinsage.
	Rupiahs.	Rupiahs.	Rupiahs.	Rupiahs.	Rupiahs.	Rupiahs.	Rupiahs.	Rupiahs.	Rupiahs.
1833-34	1,13,14,455	64,08,247	1,23,47,551	1,75,55,072	20,15,455	42,13,500	10,03,809	79,987	10,82,150
1834-35	83,08,507	26,09,808	1,20,10,065	16,05,845	12,67,313	33,71,000	47,33,829	3,19,358	40,75,280
1835-36	80,38,205	1,26,85,602	1,02,43,990				54,88,186	9,45,378	54,24,764
1836-37	60,55,749	2,91,44,738	2,98,14,292				100,26,244	22,25,633	9,774,877
1837-38	1,10,05,273	1,17,80,027	2,00,54,103				30,44,027	50,04,008	1,00,48,030
1838-39	1,41,26,786	95,74,830	2,67,63,743				86,21,005	59,01,557	1,17,72,822
1839-40	1,25,58,782	60,22,920	2,10,27,576				66,53,727	31,75,174	98,29,001
1840-41	1,04,76,052	36,32,719	1,64,19,690				61,69,870	38,00,390	1,20,38,230
1841-42	67,71,487	84,40,146	2,31,26,312				43,78,330	77,02,471	51,75,329
From China	64,09,215								
1842-43	1,76,80,544	19,75,137	2,06,11,854	4,77,640	23,72,833	25,83,078	90,51,830	20,98,840	1,07,05,608
1843-44	1,93,12,790	30,35,305	2,17,68,075	9,11,526	8,07,271	26,49,202	1,48,00,812	19,03,848	2,07,32,407
1844-45	1,86,08,922	92,63,533	2,83,35,092	11,05,615	86,12,813	42,28,458	1,40,67,867	5,19,571	1,51,00,180
1845-46	94,09,729	70,18,940	2,25,32,332	2,04,222	20,51,230	31,72,430	1,06,57,508	47,21,270	1,30,60,807
1846-47	93,64,052	69,33,536	1,64,78,122	8,31,824	33,61,979	22,32,281	80,46,025	19,98,280	66,46,050
From China	24,17,214			2,61,662	22,35,792	69,84,016			
1847-48	44,09,531	34,44,765	1,01,19,039	1,08,188	20,35,520	24,05,501	10,21,901	24,76,891	42,07,550
1848-49	92,10,687	52,30,827	1,25,03,209	1,70,611	12,11,347	12,90,676			1,11,495,701
1849-50	1,03,11,557	34,11,091	1,43,97,117	2,39,999	9,48,455	8,64,272	86,24,697	13,26,050	106,60,034
1850-51	65,77,508	32,30,354	1,31,31,097	1,06,864	19,15,794	19,04,271	1,19,45,874	67,13,940	1,00,78,080
1851-52	1,97,63,183	19,20,009	3,78,86,191	15,16,247	13,58,124	46,27,082	1,69,77,278	62,78,538	2,08,07,940
1852-53	2,71,48,980	27,37,483	2,73,66,506	58,30,970	7,78,360	38,25,173	2,20,53,720	15,61,895	2,37,98,471
1853-54	1,43,06,179	30,09,547	2,31,81,792	49,23,032	6,80,475	67,50,846	1,35,35,873	42,83,536	9,20,00,817
1854-55 <sup>1</sup>	12,79,622	43,05,048	70,40,470	9,19,176	4,09,710	28,68,420	25,75,235	13,15,423	37,47,416
	27,41,57,510	14,64,31,619	41,08,61,043	5,17,61,784	3,07,76,437	6,25,65,015	17,50,60,596	6,56,83,863	24,60,09,288
	41,06,08,967			5,54,38,221			24,12,94,208		

<sup>1</sup> The distributed amount in 1854-55 is attributed (wholly or partly) to the decrease in the exports of silver bullion in that year.

It will be seen from the above figured details, that, during the last twenty-two years, the grand total of the coinage of silver in the East India Company's mints has reached no less a sum than 71,554,928 rupees, or £ 71,554,928 : towards this amount 24,19,11,918 rupees were contributed by the old metal of the worn or recalled currencies; and 47,15,19,671 rupees constituted the proportion of bullion brought for coinage by individuals. It may be instructive to test a section of these returns in connexion with the statistics furnished by the bullion trade of India, illustrated at page 83. To select the same eight years for which the figures have been tabulated in that statement (i.e. 1846-7 to 1853-4), it is to be observed, that the total amount of silver bullion—in excess of the returned coin—minted at the three Presidencies, during the period, was over 20 crore of rupees, or twenty millions sterling;<sup>1</sup> while the balance of silver bullion remaining in India, on the traffic of the same interval, is seen to amount to 14,42,82,180 rupees, or less than fourteen and a half millions sterling. The results of the two returns are not so directly dependent on each other, that their non-accordance need cause surprise, nor is there any reason why the five and a half millions of surplus coin may not have been re-exported in that shape, in the ordinary course, even if we did not know that the Company's rupee has hitherto supplied much of the circulating medium of Ceylon, the Mauritius, and the Straits settlements. There is no ground for supposing that any quantity of the silver bullion, used for Mint purposes, is at this time supplied by India itself—though it contributed not unimportantly to the local mints up to 1832-33.<sup>2</sup> We may fairly, therefore, take the ebb and flow of bullion, in the every-day transactions of commerce, as a momentary

<sup>1</sup> [*Detail of Silver Bullion, over and above the recalled coin, minted at the three Presidencies.*]

For the years	Company's Rupees.	
1846-47 .....	1,78,29,373	} 5,28,11,792, excluding banding for 1848-49.
1847-48 .....	62,15,876	
1848-49 .....	93,86,999	
1849-50 .....	1,93,79,343	} 14,74,15,861
1850-51 .....	2,27,20,336	
1851-52 .....	3,72,55,895	
1852-53 .....	5,45,13,620	
1853-54 .....	3,28,28,087	
Co's Rs.	20,02,27,653	
Bengal total .....	10,68,53,021	
Madras total .....	1,30,75,352	
Bombay total .....	1,96,96,280	
Co's Rs.	20,02,27,653 —]	

<sup>2</sup> [See Table, page 81.]

index of the amount of coin removed by sea-transport; though such a test would by no means demonstrate either the maximum or minimum of that drain in exceptional instances. The inland or continuous absorption of coined money, on the other hand, is far beyond the reach of the boldest speculation; but, with an existing frontier line extending from Mekran to the Straits of Malacca, and with the various imperfectly civilized races on our borders all seeking eagerly for the precious metals, we may imagine that the outgoing in these directions can scarcely be inconsiderable. However, even admitting that India temporarily retains the full 14.4 millions of the 20 coined for her in eight years, the amount can by no means be said to be excessive,<sup>1</sup> nor is it to be expected—while the monetary laws remain as at present constituted—that the demand should be proportionately lessened; and, as much has been written regarding the undue absorption of bullion by India at large, it may be fitting that I should observe that, whatever may have constituted the attracting magnet, or whither the ultimate resting-place of the precious metals may have been, in older times; there is now good and sufficient reason why silver should continue to flow towards our Eastern dominions. Not to touch upon the obvious commercial necessities of our trade as of late balanced, it is to be remembered that India has advanced considerably in material prosperity: not only is there enhanced security of life and property, together with a manifest and natural increase of the population, but the facilities of traffic and real wealth have progressed with equal strides under our rule. There is now but little object in hoarding, less in secreting; the palpable value of money is better understood; and even its conversion into ornaments [was comparatively ceased since the introduction of the more extensively alloyed rupee, the hardness of the metal of which neither workers

<sup>1</sup> [The population returns, though most minutely accurate for some portions of India, are but mere guess-work for others. The following is the latest return I have been able to obtain at the East India House. This will give for British India a return of 1.1 rupee per head of increase in the currency in eight years:]

## POPULATION OF INDIA.

Under direct administration of the Governor-General (including the Punjab, Nagpore, and Oude) .....	23,055,972
Under Lieut.-Governor of Bengal .....	41,312,562
Under Lieut.-Governor of North-West Provinces .....	33,216,365
Under Governor of Madras .....	22,437,297
Under Governor of Bombay .....	11,109,067
<b>Total British Possessions .....</b>	<b>131,031,263</b>
<b>Total Independent and protected Native States .....</b>	<b>48,423,630</b>
<b>Total Foreign States (French and Portuguese) .....</b>	<b>517,149</b>
<b>Total .....</b>	<b>179,972,042 —]</b>



nor wearers approve. Equally have the advantages of direct money payments reached the comprehension of the masses, for not only, as has been remarked,<sup>1</sup> do the landholders no longer pay the Government demand in kind, but, more important still, the adherence to that primitive mode of liquidation has been generally discontinued among the village communities in their internal apportionment of responsibilities.

I may be permitted, in conclusion, to remark, in regard to the proposed re-introduction of a gold coinage, that I am altogether opposed to such a measure. A metal that must be expected progressively to fall in value—whatever the immediate needs of Europe may seem to evidence to the contrary—is not calculated to be favorably received by the people of India, especially as its market rate has already been sensibly affected in that country by the gold discoveries of Australia.

However, on the other hand, I am confident that much of the threatened difficulty might be met by a well-derised scheme for a paper currency, to consist of Government Notes duly notified as legal tenders, and definitively recognised as receivable in payment of the State revenue; but, in such a case, there must be no reservation of "until further orders," as in the Gold Proclamation of 1841; nor must there be permitted to exist a possibility of any future Administration reducing the One Hundred Rupee Note into one of the current value of eighty,<sup>2</sup> as was effected, in regard to all the securities involved, by the conversion of the old five per cent. stock. Possibly few nations could be met with, better prepared than the people of India, to accept a sound and carefully elaborated plan for a representative currency. As contrasted with their conventional morality, whether religious or social, their commercial faith and probity stand out in prominent relief. What they respect among themselves, they revere in their rulers; and, in spite of some awkward incidents in the history of British India, the English name still stands exalted with the mass of the population, who have concerned themselves less about

<sup>1</sup> [Col. Sykes, *supra cit.*, p. 54.]

<sup>2</sup> [The Government orders of 1853-54 directly affected the interest alone of the funds annulled—reducing it from 5 to 4 per cent.—the selling price of the securities remaining little below par; but the opening of the 5 per cent. loan of 1866 depreciated the market value of the principal of the converted stock, in proportion to the relatively enhanced rate of interest offered under the new loan. In the one case, the public naturally inferred that the Government was acting in good faith, and justified—by knowledge inaccessible to the non-official world—in the reduction enforced; a feeling that was still further confirmed by the distinctive proclamation of the closing of all open 4 per cent. loans, and the invitation of subscriptions at 3½ per cent. In the second instance, those who had relied upon the equity, superior information, or prescience of the Government, discovered their error.]

the acts and policy of the Central Government, than the immediate rule of the high-principled gentlemen whom this country has ordinarily sent to administer in detail the local sections of our Eastern empire. In similar relative degree to their advancement and civilization, does their knowledge of the intricacies of banking and exchange strike our European perceptions; so that, whether under the aspect of confidence in our probity, or comprehension of our measures, the Indian public may be said to be fully prepared to welcome an improved and enlarged system of state finance. But, as I desire to confine myself to the record of facts, and ordinarily abstain from speculation or argument, I bring these observations to a somewhat abrupt close.—E.T.]

[As Prinsep's Useful Tables are now definitively associated with his Numismatic Essays, it will be expedient to amplify the former by any information regarding Indian coinage equivalents or monetary values that may chance to be readily accessible; I therefore append a few notes on these subjects, extracted from that admirable work, Sir H. M. Elliot's 'Glossary of Terms used in the North-Western Provinces of India.'<sup>1</sup>

<sup>1</sup> *Dumree*, **دُمَرِي** *damel* . . . Dumree is commonly known as a nominal coin, equal to  $3\frac{1}{2}$  or  $3\frac{1}{4}$  *Dams*, or between 2 and 3 *Gudars*—so that a Dumree varies from 8 to 12 *Cowries*, according to the good will and pleasure of the money-changers. It may be useful to subjoin from the 'Dewan Pusund' a table showing the value of Dumrees and *Dams*:—

1 Dumree,	...	...	...	3½	<i>Dams</i> .
2 Dumrees,	...	...	...	6½	<i>Dams</i> , ..... 1 <i>chhodam</i> .
3 Dumrees,	...	...	...	9½	<i>Dams</i> .
4 Dumrees,	...	...	...	12½	<i>Dams</i> , ..... 1 <i>adchla</i> .
5 Dumrees,	...	...	...	15	<i>Dams</i> .
6 Dumrees,	...	...	...	18½	<i>Dams</i> , ..... 1 <i>puasa</i> .
7 Dumrees,	...	...	...	22	<i>Dams</i> .
8 Dumrees,	...	...	...	25	<i>Dams</i> , ..... 1 <i>puasa</i> .
9 Dumrees,	...	...	...	28	<i>Dams</i> .
10 Dumrees,	...	...	...	31½	<i>Dams</i> , ..... 1½ <i>puasa</i> .
11 Dumrees,	...	...	...	34½	<i>Dams</i> .
12 Dumrees,	...	...	...	37½	<i>Dams</i> , ..... 1½ <i>puasa</i> .
13 Dumrees,	...	...	...	40	<i>Dams</i> .
14 Dumrees,	...	...	...	44	<i>Dams</i> , ..... 1½ <i>puasa</i> .

<sup>1</sup> [To those who are curious in the science of numbers and would study the progressive arrangement of popular totals, I would recommend the perusal of the elaborate article, 'Chaurasi,' p. 151.]

15 Damsas,	...	...	...	47 dams.
16 Damsas,	...	...	...	50 dams, ..... 1 taka.

The table is given with some slight variations in the 'Zabdn-i-Quwanen,' but in neither are the smaller fractional amounts given with correctness.

"DAM, دَام دَام dām. . . . The Dam in the Ayem-i-Akharon, and in most Revenue accounts, is considered to be the 40th part of a rupee; but to the common people it is known as the 50th part of a Taka: 25 therefore go to a Pysa, and 12½ to an Adhala.

"CHUDAM, جِہْدَام چہدام chhadām. . . . Literally, six dams; equal to two damsas. The proper amount is six and a quarter dams, but by abbreviation it is called Chhadam.

"GUNDA, گُنْدَا گنڈا gundā. . . . Like the Dam, the Gunda of account and the Gunda of practice do not coincide. Gundas of account are but little used in the North-Western Provinces, except in Benares and the Dehra Doon, and, in consequence of its former subjection to Oudh, the Nuruzkha accounts of Rohilcond are frequently drawn out in Gundas. This Gunda is the 20th part of an Anna. The Gunda known to the common people is not of stable amount; sometimes four, and sometimes five, and sometimes even six, go to a puka Damsa, or Chhadam, according to the pleasure of the money dealers, or the state of the market. Notwithstanding this variable amount, as a Gunda is equivalent to four Cowrees, 'to count by Gundas,' signifies to count by fives, or by the quaternary scale, to which the natives are very partial;—in the same way as to count by gahens, or panjas, is to count by fives, or by the quinary scale. As four Cowrees make one Gunda, so do twenty Gundas make one Pua, and sixteen Pua make one Kulhwun. But there are grades of monetary value even below that of Cowree; for the Hindūs seem as fond of dealing with these infinitesimal quantities, as they are with the higher numbers, as exemplified in the article Cowree. Thus 3 Crant, or 4 Kaki, or 5 Hut, or 9 Dunt, or 27 Jua, or 33 Dae, or 80 TU, or 800 Susan are each equivalent to one Cowree. These are not in practical use in the North-Western Provinces, but are entered in several account books, and many of them appear to be employed in the Bazar translations of Cutlack and parts of Bengal. See Rushden's 'Gazetteer,' vol. i., p. 182, 1841. The Cowree shell, the Cyprian Mureta, has been subject to strange diminution of value, in consequence of the facilities of commerce, by which their worth has been depressed below that of the precious metals. In 1740, a rupee exchanged for 2,400 Cowrees; in 1755, for 2,500 Cowrees; and at this time as many as 6,500 Cowrees may be obtained for the rupee. Cowree in Persian is translated by Khur-mahra, literally, a 'jackan's' or 'male's' shell; because mules are ornamented in that country with trappings of shells, as a Gemin's bullock is in this country. In Arabic it is known by Wada, which Ibn Battuta says is carried in large quantities from the Maldives Islands to Bengal, where it is used as coin; and therefore there can be no doubt that the Cyprian Mureta is meant. The Kamose adds

تعلق الدفء العين that it is suspended from the neck to avert the evil eye, as it is in India to this day,<sup>1</sup> provided the neck shell is split or broken. Among European nations, excepting the English, these shells are known by the name of Porcell,

<sup>1</sup> ["Gunda is also the name applied to the knotted string which is suspended round a child's neck for the same purpose; but not, apparently, because it has any connection with the Cowree Amulet."] ]

Porcellain, Porcellanen, and Porcellane, on account of the fancied resemblance of their shape to that of the back of a little pig, whence we have the Chinese porcelain, of which the glaze, or varnish, is similar to that of the Cowren.

"Crown, <sup>१०,००,०००</sup> कड़ोड़ *kāṛoḍ* . . . Ten millions. The names of the higher numbers are thus given in the 'Zschdndt-und-Qwamant' 100 Crowe = 1 Urub; 100 Urub = 1 K.hurub; 100 K.hurub = 1 Neel; 100 Neel = 1 Pudum; 100 Pudum = 1 Sank.h; 100 Sank.h = 1 Uld; 100 Uld = 1 Unk; 100 Unk = 1 Pudim." ]



## BRITISH INDIAN WEIGHTS AND MEASURES.

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The system of Weights established by Regulation VII. of 1833, is founded on the same unit as the rupee of the equalized monetary system of British India, it having been found that the weight of the Madras, Bombay, and Farrukhabad rupee, already very generally used throughout Upper and Western India, as the foundation of the Ser and Man, could be substituted for the sikki weight of Bengal by a very slight modification of the latter, which would be hardly perceptible in commercial dealings. Other palpable advantages of the introduction of the new weight were pointed out,<sup>1</sup> of which it is only necessary here to allude to the three following:—

1. That the *sees* formed from the modified weight would be precisely equal to one hundred English troy pounds; and

2. That thirty-five *sees* would also be precisely equal to seventy-two pounds avoirdupois:—thus establishing a simple connection void of fractions, between the two English metrical scales and that of India.

3. The weight of the new unit nearly accorded with the average weight of many of the native *tolás* sent home for examination at the London mint, by order of the Honourable Court of Directors; as well as with that of Akbar, deduced from the weight of many coins of that emperor.

We shall begin the present division of our subject, as in the case of the Indian coins, by setting forth in the first instance the present legal system, and afterwards providing a brief descriptive catalogue of the many other weights prevailing throughout the Company's provinces, with comparative tables for the conversion of one denomination into the other.

The unit of the British Indian ponderary system is called the *tolá*. It weighs 180 grains English troy weight. From it upwards

<sup>1</sup> *Vide* a paper on the subject in the 'Journal of the Asiatic Society of Bengal' for October, 1832, vol. i., p. 443.

are derived the heavy weights, viz.:—Chhatk, Ser, and Man (or Maund); and, by its subdivisions, the small or jeweller's weights, called Masha, Rati, and Dhana.

The following scheme comprehends both of these in one series:—

Man.	Fansri. <sup>1</sup>	Ser. <sup>2</sup>	Chhatk. <sup>3</sup>	Tola. <sup>4</sup>	Masha. <sup>5</sup>	Rati. <sup>6</sup>	Dhna. <sup>7</sup>
1	8	40	640	3200	38400	307200	1228800
	1	5	80	400	4800	38400	153600
		1	16	80	960	7680	30720
			1	5	60	480	1920
				1	12	96	384
					1	8	32
						1	4

The *man* (or that weight to which it closely accords in value, and to which it is legally equivalent in the new scale) has been hitherto better known among Europeans by the name of 'bazar maund,' but upon its general adoption, under Regulation VII. of 1833, for all transactions of the British Government, it should be denominated the British Maund (in Hindi, *Angrez Maund*), to distinguish it at once from all other weights in use throughout the country.\*

The Fansri is, as its name denotes, a five-ser weight, and therefore should not form an integral part of the scale; but, as its use is very general, it has been introduced for the convenience of reference.

The Ser being the commonest weight in use in the retail business of the bazars in India, and being *Ratle*, according to the pernicious system hitherto prevalent, to vary in weight for every article sold as well as for every market, is generally referred to the common unit in native mercantile dealings, as, "the ser of so many tolas," (or sikkas, haris, takas, etc.). The standard or bazar ser being always 80 tolas.

The chhatk is the lowest denomination of the gross weights, and is commonly divided into halves and quarters (called in Bengali, *Lachha*) thus marking the line between the two series, which are otherwise connected by the relation of the ser, etc. to the tola.

The tola is chiefly used in the weighing of the precious metals and

<sup>1</sup> Fansri, *پنسر* from *پنج* = *پنج*, پن "five," and *سیر* "a ser."

<sup>2</sup> Ser, *शेर शेटक* (Shakersett *सेटक*), *سیر*.

<sup>3</sup> Chhatk, *छटाक* from *छट*, "six," and *चक* "a mark."

<sup>4</sup> Tola, *तोला* *تولا*.

<sup>5</sup> Masha, *माष माषा*, *ماشه*.

<sup>6</sup> Rati, *रति, रती*, *رَتِي*, *रतिका*. <sup>7</sup> Dhna, *धान* "grain, rice."

\* In the same way the Madras, Bombay, Furruckabad rupee (when the sikkā rupee is abolished, and an English device adopted), may be called "the British rupee," and in the native languages *Angrez Angrez*.

coin; all bullion at the mints is received in this denomination, and the tables of bullion produce (as seen in the foregoing pages) are calculated per 100 tolas. It is also usual at the mints to make the subdivisions of the tola into *ānās* (sixteenths) and *pā's*, in lieu of *māshas* and *ratīs*.

*Māshas*, *ratīs*, and *dhāns*, are used chiefly by native goldsmiths and jewellers. They are also employed in the native evaluation by assay of the precious metals; thus, '10 *māshas* fine' signifies 10-12ths pure, and corresponds to '10oz. touch' of the English assay report of silver. There is a closer accordance with the English gold assay scale, inasmuch as the 96 *ratīs* in a tola exactly represent the 96 carat grains in the gold assay pound, and the *dhān*, the quarter-grain. As it is sometimes necessary to convert the assay report from one denomination into the other,<sup>1</sup> the following comparative table is here inserted.

TABLE of the Correspondence of English and Indian Assay Weights.

ENGLISH ASSAY.			HINDU ASSAY FOR SILVER METALS.			ENGLISH ASSAY.			HINDU ASSAY.		
SILVER.	Touch.		SILVER.	Touch.		SILVER.	Touch.		SILVER.	Touch.	
Trois.	Touch.	Fine.	Trois.	Touch.	Fine.	Trois.	Touch.	Fine.	Trois.	Touch.	Fine.
10. 0. 0.	24. 0.	12. 0.	11. 0.	22. 0.	11. 0.	10. 0.	20. 0.	10. 0.	10. 0.	20. 0.	10. 0.
11. 17½	25. 3.	11. 7.	10. 17½	21. 3.	10. 7.	9. 17½	19. 3.	9. 7.	9. 17½	19. 3.	9. 7.
11. 15	25. 2.	11. 6.	10. 15	21. 2.	10. 6.	9. 15	19. 2.	9. 6.	9. 15	19. 2.	9. 6.
11. 12½	23. 1.	11. 3.	10. 12½	21. 1.	10. 5.	9. 12½	19. 1.	9. 5.	9. 12½	19. 1.	9. 5.
11. 10	23. 0.	11. 3.	10. 10	21. 0.	10. 4.	9. 10	19. 0.	9. 4.	9. 10	19. 0.	9. 4.
11. 7½	22. 3.	11. 3.	10. 7½	20. 3.	10. 3.	9. 7½	18. 3.	9. 3.	9. 7½	18. 3.	9. 3.
11. 5	22. 2.	11. 2.	10. 5	20. 2.	10. 2.	9. 5	18. 2.	9. 2.	9. 5	18. 2.	9. 2.
11. 2½	22. 1.	11. 1.	10. 2½	20. 1.	10. 1.	9. 2½	18. 1.	9. 1.	9. 2½	18. 1.	9. 1.

(To find the corresponding *devisé* assay, see the tables in pages 10, 11. The English assay report is generally 'as much worse (or better)' than standard, but the *touch* is usually known therefore, the standard being 11 oz. for silver and 22 carats for gold; or 11 *māshas*, *Hindū* reckoning.)

The correspondence of the Indian system of weights with the troy weight of England, and with the 'système métrique' of France, may be best shown by a table. The coincidence of the former is perfect: in the latter, the *māsha* nearly accords with the gramme, and the *ser* with the kilogramme.

BRITISH TROY WEIGHTS.	HINDU TROY WEIGHTS.				FRANCE WEIGHTS.
	TO.	SO.	ANNA.	PA.	GRAMMES.
One Maan .....	= 100	0	0	0	= 37020.182
One Ser .....	= 2	5	0	0	= 933.993
One Chhatrak .....	= 0	1	17	12	= 58.310
One Tola .....	= 0	0	7	12	= 11.962
One Māsha .....	= 0	0	0	15	= 0.972
One Rati .....	= 0	0	0	1.875	= 0.122

<sup>1</sup> Especially in the transmission of Regulations concerning the mints, the English expressions being unintelligible without explanation.



For the conversion of English troy weights into those of India, the following scale will suffice, since the simplicity of their relation renders a more detailed table unnecessary.

Lb. Troy.	Gr.	Dwt.	Grains.		Tolas and Decimals.
1	12	240	5760	=	32.000
	1	20	480	=	2.6666 etc.
		1	24	=	0.1333 etc.
			1	=	0.0055 etc.

The accordance of the *man* weight with the 100lbs. troy of England affords a ready means of ascertaining its relative value in the standards of other countries employed in weighing the precious metals, since tables of the latter are generally expressed in lbs. troy. The following are a few of the valuations for the principal weights of Europe, etc. extracted from Kelly's 'Cambist,' p. 222. The weights in troy grains have been converted into tolas by dividing them by 180.

TABLE of Comparison of the Tola and Man with the Gold and Silver, or Troy, weights of other countries.

PLACE AND DESIGNATION.		Weight of a single M. mark, etc. in tolas.	Number equal to 1 man, of 180 lbs. Troy.
ALBANY	Matical	8.405	7890.410
BARRA	Mical	8.450	8000.000
CAIRO	Rotbols	36.905	86.564
CALCUT	Mical	6.283	8347.826
CHINA	Tael	3.721	993.440
CONSTANTINOPLE	Choques	27.538	116.199
DAMASCUS	Ounce	2.800	1232.173
DENMARK	Mark	26.183	158.540
ENGLAND	Pound	32.000	100.000
FRANCE	Kilogramme	66.745	27.320
GERMANY	Cologne mark	26.044	150.045
HOLLAND	Mark	21.100	151.058
ITALY	Fluence and Lighorn Libra	29.111	100.923
MOOREA	Vakia	2.655	1205.020
PRUG	Tael	1.138	2427.307
PRUSSIA	Dierham	6.830	3812.297
PORTUGAL	Mark	19.675	102.642
PRUSSIA	Mark	20.050	109.690
ROME	Libbra	20.077	110.040
RUSSIA	Pound	34.103	91.161
SPAIN	Mark	19.725	162.230
VENICE	Mark	26.432	106.457
VIENNA	Mark	24.073	132.933

The principal dealings in bullion being with England, where it is weighed by the pound troy, while in India it is received by the tola, a simple table for the mutual conversion of these two weights (without regard to mans and sers) may be useful: it needs no explanation.

TABLE for the mutual conversions of Tolls and Pounds Try.

TOLLING POUNDS TRY AND DUTYMAN.				TOLL PORTUGAL TOLLS.			
Toll.	Pounds.	Toll.	Pounds.	Pounds.	Toll.	Pounds.	Toll.
1000	31.2500	550	17.1875	100	3200	55	1760
990	30.9375	540	16.8750	90	3168	54	1728
980	30.6250	530	16.5625	80	3136	53	1696
970	30.3125	520	16.2500	70	3104	52	1664
960	30.0000	510	15.9375	60	3072	51	1632
950	29.6875	500	15.6250	50	3040	50	1600
940	29.3750	490	15.3125	40	3008	49	1568
930	29.0625	480	15.0000	30	2976	48	1536
920	28.7500	470	14.6875	20	2944	47	1504
910	28.4375	460	14.3750	10	2912	46	1472
900	28.1250	450	14.0625	00	2880	45	1440
890	27.8125	440	13.7500	99	2848	44	1408
880	27.5000	430	13.4375	88	2816	43	1376
870	27.1875	420	13.1250	77	2784	42	1344
860	26.8750	410	12.8125	66	2752	41	1312
850	26.5625	400	12.5000	55	2720	40	1280
840	26.2500	390	12.1875	44	2688	39	1248
830	25.9375	380	11.8750	33	2656	38	1216
820	25.6250	370	11.5625	22	2624	37	1184
810	25.3125	360	11.2500	11	2592	36	1152
800	25.0000	350	10.9375	00	2560	35	1120
790	24.6875	340	10.6250	99	2528	34	1088
780	24.3750	330	10.3125	88	2496	33	1056
770	24.0625	320	10.0000	77	2464	32	1024
760	23.7500	310	9.6875	66	2432	31	992
750	23.4375	300	9.3750	55	2400	30	960
740	23.1250	290	9.0625	44	2368	29	928
730	22.8125	280	8.7500	33	2336	28	896
720	22.5000	270	8.4375	22	2304	27	864
710	22.1875	260	8.1250	11	2272	26	832
700	21.8750	250	7.8125	00	2240	25	800
690	21.5625	240	7.5000	99	2208	24	768
680	21.2500	230	7.1875	88	2176	23	736
670	20.9375	220	6.8750	77	2144	22	704
660	20.6250	210	6.5625	66	2112	21	672
650	20.3125	200	6.2500	55	2080	20	640
640	20.0000	190	5.9375	44	2048	19	608
630	19.6875	180	5.6250	33	2016	18	576
620	19.3750	170	5.3125	22	1984	17	544
610	19.0625	160	5.0000	11	1952	16	512
600	18.7500	150	4.6875	00	1920	15	480
590	18.4375	140	4.3750	99	1888	14	448
580	18.1250	130	4.0625	88	1856	13	416
570	17.8125	120	3.7500	77	1824	12	384
560	17.5000	110	3.4375	66	1792	11	352

To convert the decimals of a *li* into ounces and drs., and vice versa.

12 oz. = 1.000	6 oz. = 0.500	29 drs. = 0.883	2 drs. = 0.627
11     .916	5     .416	18     .075	7     .023
10     .833	4     .333	10     .000	5     .000
9     .750	3     .250	14     .058	3     .012
8     .666	2     .166	12     .051	2     .008
7     .583	1     .083	10     .044	1     .004

1 ounce try = 2.667 tolls, or 3 tolls 3 wisches.

7½ drs. " = 1 toll, and 1 drs. = 1.33 tolls.

The same degree of correspondence cannot be expected between the Indian weights and the avoirdupois weights of England; but, as the latter are employed in all the transactions of commerce, excepting those of bullion and some other trifling articles, it becomes necessary to give tables for their conversion at greater length. In these, as on former occasions, the system of expressing fractions in decimals has been preferred, from the very great facility it affords in taking out the equivalents of quantities to which the tables do not extend. Decimal numeration is too well understood in the present day to require explanation, but one example may be advantageously given as applying to all the tables hereafter constructed on the same principle:

*Required the equivalent of 57,353 mans, 35 sers, 6 chhataks, in avoirdupois pounds.*

Taking the numbers opposite to 57, 35, and 50 respectively, and removing the decimal point,—in the first three places, to the right hand;—in the second, one place to the right;—and in the third, one place to the left, we have

57,000 mans	=	460246.
350	=	28540.
35	=	246.837
57 sers	=	75.114
6 chhataks	=	.771

*lbs. 4710402.742 = 12 cwt. nearly.*

Since 35 sers are exactly equal to 72 pounds avoirdupois, the following simple and accurate rules for their mutual conversion, will be found equally convenient with the table.

**RULE I.**—*To convert Indian weight into avoirdupois weight.*

1. Multiply the weight in sers by 72, and divide by 35: the result will be the weight in lbs. av.
2. Or, multiply the weight in mans by 36, and divide by 49: the result will be the weight in cwt. av.

**RULE II.**—*To convert avoirdupois weight into Indian weight.*

1. Multiply the weight in lbs. av. by 35, and divide by 72: the result will be the weight in sers.
2. Or, multiply the weight in cwt. by 49, and divide by 36: the result will be the weight in mans, or maunds.<sup>1</sup>

One ton = 27.222 mans, or  $27\frac{1}{4}$  mans nearly.

One man = 32½ lbs. av. exactly.

<sup>1</sup> For facility of recollection this rule may be expressed in *arithmetical poetry* thus:

Of one hundred weight should you incline  
A sum in Indian maunds to fix;—  
First multiply by forty-nine,  
And then divide by thirty-six.

TABLE for converting *New Roman Mans (or Minns)*, *Serx*, and *Uhhatsiks*, into *Avairdupois Pounds*, and *Decimals*.

Mans.	Decimals, Avair.	Mans.	Pounds, Avair.	Serx.	Pounds, Av.	Value of oz. and drams in decimal of lb.
100	8228.571	55	4525.714	serx 48	82.285	16 = 1.0000
99	8146.285	54	4443.429	30	80.228	15 = .9987
98	8064.000	53	4361.143	24	78.171	10 = .9375
97	7981.714	52	4278.857	37	76.114	14 = .9062
96	7899.429	51	4196.571	26	74.057	14 = .8750
95	7817.143	50	4114.286	35	72.000	12 = .8438
94	7734.857	49	4032.000	34	69.943	13 = .8125
93	7652.571	48	3949.715	23	67.886	12 = .7812
92	7570.285	47	3867.429	32	65.829	12 = .7500
91	7488.000	46	3785.143	31	63.771	11 = .7188
90	7405.714	45	3702.857	20	61.714	11 = .6875
89	7323.429	44	3620.571	29	59.657	10 = .6562
88	7241.143	43	3538.286	28	57.600	10 = .6250
87	7158.857	42	3456.000	37	55.543	9 = .5938
86	7076.571	41	3373.715	26	53.486	9 = .5625
85	6994.285	40	3291.429	25	51.429	8 = .5312
84	6912.000	39	3209.143	24	49.371	8 = .5000
83	6829.714	38	3126.857	23	47.314	7 = .4688
82	6747.429	37	3044.571	22	45.257	7 = .4375
81	6665.143	36	2962.286	21	43.200	6 = .4062
80	6582.857	35	2880.000	20	41.143	6 = .3750
79	6500.571	34	2797.715	19	39.086	5 = .3438
78	6418.285	33	2715.429	18	37.029	5 = .3125
77	6336.000	32	2633.143	17	34.971	4 = .2812
76	6253.714	31	2550.857	16	32.914	4 = .2500
75	6171.429	30	2468.571	15	30.857	3 = .2188
74	6089.143	29	2386.286	14	28.800	3 = .1875
73	6006.857	28	2304.000	13	26.743	2 = .1562
72	5924.571	27	2221.715	12	24.686	2 = .1250
71	5842.285	26	2139.429	11	22.629	1 = .0938
70	5760.000	25	2057.143	10	20.571	1 = .0625
69	5677.714	24	1974.857	9	18.514	16 drs. = .0312
68	5595.429	23	1892.571	8	16.457	14 = .0347
67	5513.143	22	1810.286	7	14.400	13 = .0308
66	5430.857	21	1728.000	6	12.343	12 = .0269
65	5348.571	20	1645.715	5	10.286	11 = .0230
64	5266.285	19	1563.429	4	8.229	10 = .0191
63	5184.000	18	1481.143	3	6.171	9 = .0151
62	5101.714	17	1398.857	2	4.114	8 = .0112
61	5019.429	16	1316.571	1	2.057	7 = .0073
60	4937.143	15	1234.285	0	0.000	6 = .0034
59	4854.857	14	1152.000	0	0.514	5 = .0194
58	4772.571	13	1069.715	0	0.386	4 = .0135
57	4690.285	12	987.429	0	0.257	3 = .0096
56	4608.000	11	905.143	0	0.129	2 = .0057

[The last column serves for the conversion of the decimals of a pound avairdupois into ounces and drams. It will be found useful also with the two following Tables.]

TABLE for the conversion of *Mans* (or *Maunds*) into *Tons*, *Hundred-weights*, and *Pounds*.

<i>Mans.</i>	<i>Tons.</i>	<i>cwt.</i>	<i>lbs.</i>	<i>Mans.</i>	<i>Tons.</i>	<i>cwt.</i>	<i>lbs.</i>
100000	3673	9	43.06	100	3	13	82.57
10000	367	6	103.10	90	2	6	13.72
9000	330	12	27.29	80	2	18	86.86
8000	293	17	61.68	70	2	11	48.00
7000	257	2	95.97	60	2	4	9.14
6000	220	8	18.36	50	1	16	82.29
5000	183	13	52.56	40	1	9	43.43
4000	146	18	86.84	30	1	2	4.57
3000	110	4	9.13	20	0	14	77.71
2000	73	9	43.42	10	0	7	28.83
1000	36	14	77.71	9	0	0	68.57
900	32	1	25.13	8	0	5	95.28
800	29	7	84.56	7	0	5	16.00
700	25	14	31.09	6	0	4	42.11
600	22	0	91.42	5	0	3	75.82
500	18	7	33.83	4	0	2	105.14
400	14	12	98.28	3	0	2	21.05
300	11	0	45.71	2	0	1	82.57
200	7	6	105.14	1	0	0	82.28

TABLE for converting *Avoirdupois* weights into *British Indian* weights.

<i>Tons.</i>	<i>Mans or Maund Maunds.</i>			<i>Cwt.</i>	<i>Mans or Maund Maunds.</i>			<i>lbs.</i>	<i>Mans or Maund Maunds.</i>		
	<i>ma.</i>	<i>sr.</i>	<i>ekkal.</i>		<i>ma.</i>	<i>sr.</i>	<i>ekkal.</i>		<i>ma.</i>	<i>sr.</i>	<i>ekkal.</i>
100	2722	10	10	19	25	34	72	100	1	8	30
90	2450	1	9	18	24	30	61	90	1	5	19
80	2177	32	8	17	23	5	91	80	0	38	14
70	1905	23	7	16	21	31	2	70	0	34	0
60	1633	14	6	15	20	16	103	60	0	29	21
50	1361	5	5	14	19	2	51	50	0	24	42
40	1088	36	4	13	17	27	122	40	0	19	7
30	816	27	3	12	16	13	61	30	0	14	24
20	544	18	2	11	14	38	141	20	0	9	111
10	272	9	1	10	13	24	71	10	0	4	131
9	245	0	21	9	12	10	61	9	0	4	6
8	217	31	4	8	10	35	9	8	0	3	141
7	190	22	51	7	9	21	11	7	0	3	61
6	163	13	7	6	8	6	101	6	0	2	141
5	136	4	81	5	6	32	311	5	0	2	7
4	108	35	10	4	5	17	121	4	0	1	161
3	81	26	111	3	4	3	51	3	0	1	71
2	54	17	13	2	2	28	141	2	0	0	161
1	27	8	141	1	1	14	71	1	0	0	71

The British Indian system of weights having been ordered by Regulation VII. of 1833, to supersede the bazar weights previously used, (of which the unit was the old Murshidabad rupee weight of 179.666 troy grains, called the sikkā weight), in all Government transactions, a corresponding adjustment was made of all the weights in use at the several Government offices of the metropolis—the custom-house, the mint, the treasury, the bank, and the police; and sets of standard aer and tolā weights of brass were ordered to be prepared at the mint for distribution to all the collectors' offices of the Bengal presidency.

The Regulation in question expressly avoided enforcing the change by any penal enactment, trusting that the sense of public convenience would quickly ensure its substitution for the irregular system now prevalent; and directing only that the verification and adjustment of all weights at the Calcutta and Sagar assay offices, should be made for the future in accordance with the new scale.

In the ordinary dealings of commerce, the difference between the bazar weights and the new weights is not recognizable: indeed the error of single large weights is generally found to exceed the amount of modification now introduced: no inconvenience therefore remains from the still general use of the old bazar weights, while the principal European mercantile establishments of the town, as well as all the native bullion merchants, have already had their weights adjusted to the new system.

Where it may be required, however, to know the precise difference between the old and new system, recourse may be had to the following table. The new *mas* will be seen to be one *chhatāk* and a quarter, nearly, heavier than the old bazar *mas*: which would induce an increase in the price of articles to the trifling extent of one-fifth per cent. or three *ānās* in a hundred *rupees*.

TABLE for the mutual conversion of Tolās and old Sikkā Weight of Bengal.

Old Sikkā Weight into Tolās.				Tolās into Sikkā Weight.			
Old Sikkā Weight.	Tolās.	Old Sikkā Weight.	Tolās.	Tolās.	Old Sikkā Weight.	Tolās.	Old Sikkā Weight.
3200	3194.660	800	798.515	2200	3205.948	800	801.487
1600	1507.330	700	698.700	1600	1602.974	700	701.301
1500	1497.216	600	598.886	1500	1502.789	600	601.115
1400	1397.461	500	499.072	1400	1402.604	500	500.929
1300	1297.587	400	399.257	1300	1302.419	400	400.734
1200	1197.772	300	299.443	1200	1202.220	300	300.557
1100	1097.958	200	199.628	1100	1102.044	200	200.371
1000	998.144	100	99.814	1000	1001.869	100	100.185
900	898.329	1 <i>lūā</i>	0.602	900	901.673	1 <i>māsha</i> .	0.084

This table will answer equally well for the conversion of old bazar mans or sers into new mans and sers, the ratio being the same, namely, as 180 : 179.666.

#### FACTORY WEIGHTS.

There is another species of weight employed in some branches of the commerce of Calcutta which it will be necessary to expel before uniformity can be established. This is the system of factory weights originally used by 'the English factory at Bengal,' and now generally retained in the commercial transactions of the Government, although long since superseded in their customs and revenue business by the bazar weights.

It would appear to have been adopted in 1787 to save calculation in the home remittances of produce, three factory mans being almost exactly equal to two hundred-weight avoirdupois.

A moment's inspection of the Calcutta price-current will be sufficient to prove the great inconvenience which the retention of the two-fold system must cause. Some articles are quoted at 'sikka rupees per bazar man,' others at 'sikka rupees per factory man,' and others again at 'current rupees per factory man,' the current rupee being an imaginary money, of which 116 are assumed as equal to 100 sikkas?

To increase the perplexity, the same article is often estimated in a different scale as it comes from different places; thus, Badnagor and Baulash silk are sold per bazar ser : while Kasimbazar and Gouaten silk are sold per factory ser. Tin, iron, verdigris, Japan and English copper, per 'sikka rupees and factory man : '—steel, zinc, lead, mercury, and South American copper, per current rupees and factory man!—Gum-Benjamin is sold by factory, all other gums by bazar, weight :—stick-lac by the former, but shell-lac and lac dye by the latter!

Many more examples might be furnished of similar inconsistency. Saltpetre, indigo, silk the produce of the Straits, and metals, are the principal articles sold by the factory maund; while grain, sugar, cotton, most articles of food, and all of retail bazar consumption, are sold by the bazar weight.

The old bazar maund was defined to be ten per cent. heavier than the factory maund; therefore the latter will be equal to 74 lbs. 10 oz. 10.666 dr. avoirdupois; the ser to 1 lb. 33 oz. 13.866 dr.; and the chhaták to 1 oz. 13.366 dr.

From the simple relation of the factory to the bazar weight, there can be no difficulty whatever in substituting the latter in its place, in the valuation of such articles of commerce as are still estimated by the former :—nothing more being necessary than to add ten per cent. to the prices formerly quoted per factory maund. Thus, indigo sold at 100



or 200 rupees per factory maund, will now be 110 or 220 rupees per man, and so of other goods. As such goods are invariably weighed at the custom-house on the new system, and the duty or drawback calculated accordingly, it is only a source of perplexity to buy and sell by the obsolete weight; and to retain two species of weights in a warehouse, must obviously open the door to continual mistakes, if not occasionally even to fraudulent interchange.

The following Table gives the conversion of factory weights into new mans accurately, but in ordinary practice the following simple rules will suffice.

I. Deduct one-eleventh from the weight in factory maunds, sers, or chhatáks; the result will be the weight in British Indian (or bázár) mans, sers, and chhatáks.

II. Add ten per cent. to the price per factory maund, etc., the result will be the price per British Indian (or bázár) man, etc.

The reverse table has not been calculated, because, it is to be hoped, it will never be required.

TABLE for the conversion of Bengal Factory weights into new standard mans and decimals.

Factory weights, mans.	New man.	Factory weights.	New man.
10000	9974.400	maund. 5	4.627
1000	997.440	4	3.630
100	99.744	3	2.722
90	81.669	2	1.814
80	73.593	1	0.907
70	63.520	sers. 20	0.463
60	54.446	10	0.232
50	45.372	5	0.115
40	36.297	4	0.091
30	27.223	3	0.068
20	18.148	2	0.045
10	9.074	1	0.023
9	8.167	chhatáks. 5	0.011
8	7.259	4	0.008
7	6.352	3	0.005
6	5.444	2	0.003
		1	0.001

(To reduce the decimals into sers and hundredths, multiply by 4, and move the decimal point one place to the right: to convert the hundredths into chhatáks, multiply by 10 and divide by 10.)

#### CURRENT RATES PRICES.

By a fortunate chance we are able to meet the apparently perplexing practice of estimating the values of some articles in 'current rupees per factory weight,' with a very simple method of expressing their equivalents according to the new system, so as to obviate any supposed

difficulty in eradicating long established habits: for 100 current rupees being equal to  $1\frac{1}{2} + \frac{1}{4} + \frac{1}{8}$  or 86.207 sikká rupees, and one factory man being equal to .90744 man, as above stated; the ratio of the two modes of valuation will be as 100 to 86.207  $\div$  .90744, or 95 exactly. Hence may be deduced the following simple rules:—

I. Deduct five per cent. from the price or value quoted in 'current rupees per factory weight,' and the result will be its equivalent in sikká rupees per bázár (or now) weight.'

II. Add one and a third per cent. to the price or value quoted in 'current rupees per factory weight,' and the result will be its equivalent in Farrukhábád, Madras, or Bombay rupees, per bázár (or now) weight.

The following table is constructed on this principle, and is applicable to maunds, sers, and chhatáks, as the case may be:

TABLE for the conversion of values quoted in current rupees per factory maund, ser, or chhaták into their equivalents in sikká or Farrukhábád rupees per now standard (or bázár) weights.

CURRENT RUPEES per factory man, etc.	Sikká rupees per bázár man, etc.	Fa. Mad. Bomb. Rs. per now man, etc.	Current Rupee per factory man, ser, etc.	Deductible of sikká rs. per 100 man, etc.	Deductible of Fa. Mad. Bomb. rs. per 100 man, ser, etc.
1000	950.	1013.333	15	0.891	0.950
100	95.	101.333	14	.831	.586
90	85.5	91.200	13	.772	.522
80	75.	81.066	12	.7126	.460
70	65.5	70.933	11	.653	.396
60	57.	60.800	10	.594	.333
50	47.5	50.666	9	.534	.270
40	38.	40.533	8	.475	.206
30	28.5	30.400	7	.416	.143
20	19.	20.266	6	.356	.080
10	9.5	10.133	5	.297	.016
5	4.75	5.066	4	.2375	.053
3	2.85	3.040	3	.178	.020
2	1.90	2.026	2	.119	.016
1	0.95	1.013	1	.059	.003

(To reduce the deductibles into Rupees and Paise, see Table p. 11.)

The only other denomination used extensively at the Presidency is the salt man, which is  $2\frac{1}{2}$  per cent. heavier than the bázár man, having 82 tolas to the ser. It is much to be regretted that this absurd weight should not only have been retained, but that after the promulgation of the new regulation, the Government ordered a completely new and expensive series of brass weights to be made up for the Salt Board, at considerable cost, on the old system! It would of course have been just as simple to order the weightments of salt to be made

with the new *man*, and  $2\frac{1}{2}$  per cent. surplus to be levied on the gross amount to cover wastage; the weights would then have been convertible to general use, whereas now they are confined to one specific purpose.

In the Madras and Bombay Presidencies, the weights of commerce have been long since made to conform with the *avoirdupois* system, by assuming the nearest approximation in pounds to the local *man*, and adjusting the latter to it. Thus at Madras the '*man*' is assumed as equal to 25 lbs. *avoirdupois*;<sup>1</sup> and at Bombay the more convenient equivalent of 25 lbs., or one quarter cwt., has been adopted for the standard *man*. As these weights (especially the latter) are convenient by their direct relation to the commercial unit of England, it is neither to be expected nor to be wished that they should be exchanged for the weights of Bengal. Indeed, it should be remembered, that the use of purely English weights, even in Calcutta counting-houses, can lead to no confusion:—it is the introduction of a fictitious native weight, like the factory *man*, that is objectionable, as being neither Indian nor English.

The *ser* at Madras contains 8 *palāms*<sup>2</sup> of 16 pagodas each, so that, like that of Bengal, it has the sub-division into 80 parts. In the Malabar system, also used at Madras,  $2\frac{1}{2}$  *palāms* (*fanams*) make a *ser*, and the *tola* occupies the place of the *man*; it is equal to 25.192 lbs.

The *ser* at Bombay is divided into 80 *pā'is*, or 72 *tānkā*,<sup>3</sup> or 72 troy grains each.

The conversion of the Madras and Bombay *mans* into the *bāzār man* of Bengal requires another table. A practical estimate of their relative values may, however, be held in the memory by means of the following simple ratios:—

Ten Madras *mans* = 3 *mans*,  $1\frac{1}{2}$  *ser*s, Bengal, nearly.

Three Bombay *mans* = 1 *man*, 1 *ser*, nearly.

The exact ratios between the cwt. and the *man* given in page 100, are of course applicable to the derivatives of the *avoirdupois* pound in the other Presidencies.\*

<sup>1</sup> [Generally, though corruptly, written '*palām* or *pullām*.' YAM. from a. पल.]

<sup>2</sup> [a. टंक *tānk*, MAR. टंक. टांक *tānk* or *tānk*.]

<sup>3</sup> The readiest practical method of reducing the Indian to the English system, where the utmost accuracy is not required, is derived from the equation, 300 *mans* = 11 tons. Hence we have the following rules in addition to those given in page 100:—

III. Add a tenth to a sum of *mans*, and divide by 30 results—the weight in tons.

IV. Multiply a sum in tons by 30, and deduct an eleventh from the product: results—its value in *mans*.

V. Deduct one-third from a weight in *mans*, and increase the remainder by one-tenth: results—the weight in cwt. nearly.

VI. Add one-half to a given weight in cwt., and diminish the sum by one eleventh: results—the equivalent in *mans*, nearly.

For the more exact conversion of one denomination into the other, the following table may be consulted :

TABLE for the mutual Conversion of Bengal, Madras, and Bombay mans.

Bengal mans.	Madras mans.	Bombay mans.	Madras mans.	Bengal mans.	Bombay mans.	Bengal mans.
1000	3291.428	2854.775	1000	302.829	1000	340.278
100	329.143	285.477	100	30.282	100	34.028
90	296.229	254.492	90	27.244	90	30.625
80	263.315	235.104	80	24.266	80	27.222
70	230.401	205.716	70	21.268	70	23.819
60	197.487	176.328	60	18.250	60	20.416
50	164.571	146.939	50	15.191	50	17.014
40	131.656	117.552	40	12.132	40	13.612
30	98.742	88.164	30	9.114	30	10.209
20	65.828	58.775	20	6.076	20	6.806
10	32.914	29.388	10	3.038	10	3.403
1	3.291	2.939	1	0.304	1	0.340
seers, 30	2.469	2.203	seers, 30	0.228	seers, 30	0.255
20	1.646	1.469	20	0.152	20	0.170
10	0.823	0.734	10	0.076	10	0.085
5	0.411	0.367	5	0.038	5	0.042
4	0.329	0.294	4	0.030	4	0.034
3	0.246	0.220	3	0.022	3	0.025
2	0.164	0.147	2	0.015	2	0.017
1	0.082	0.073	1	0.008	1	0.008

The next table will be found very convenient for reducing the decimals of mans in the foregoing, and upon all other occasions, into the ordinary divisions of the native weights, viz., seers and chhatāks.

TABLE for converting seers and chhatāks into decimals of a man, and vice versa.

Chhatk.	Decimals for				Seers.	Decimals.
	0 seer.	1 seer.	2 seers.	3 seers.		
0	.0000	.0250	.0500	.0750	4	.0000
1	.0016	.0266	.0516	.0766	8	.2000
2	.0031	.0281	.0531	.0781	12	.3000
3	.0047	.0297	.0547	.0797	16	.4000
4	.0062	.0313	.0562	.0812	20	.5000
5	.0078	.0328	.0578	.0828	24	.6000
6	.0094	.0344	.0594	.0844	28	.7000
7	.0109	.0359	.0607	.0859	32	.8000
8	.0125	.0375	.0625	.0875	36	.9000
9	.0141	.0391	.0641	.0891	40	.10000
10	.0156	.0406	.0656	.0906		
11	.0172	.0422	.0672	.0922		
12	.0187	.0437	.0687	.0937		
13	.0203	.0453	.0703	.0953		
14	.0219	.0469	.0719	.0969		
15	.0234	.0484	.0734	.0984		

The three last figures of decimals recurring in the same order after every four seers, it is unnecessary to insert them at length.

## GENERAL TABLE OF INDIAN WEIGHTS.

However desirable it may be, in theory, to reduce the system of weights throughout the vast continent of India to order and uniformity; in practice, it is well known that insuperable difficulties oppose the execution of such a project: if ever effected, it can only be done in the gradual progress of time, by the spread of knowledge, and by the growing inter-communion of the multitudes engaged in the internal traffic of the country, who would by degrees feel the advantage of uniformity in their dealings.

It is a comparatively easy thing for a government, having the sole issue of coin within its own territories, to fix upon a convenient unit of value, and establish it to the supersession of former currencies; but the weights of a country do not so immediately come in contact with the ruling power (even though it have a commercial character itself:) not at least as regards the domestic or market weights, which are localised in a thousand distinct foci under as many modifications of prices, customs, and modes of calculation and sub-division.

It is but lately that the Legislature has attempted to equalise the weights of England, and then only by the retention of a double system. India does, however, in some respects, offer a better chance of success than the countries of Europe, where each locality has, by municipal laws, rendered permanent and cognate its own system, however differing from that of its neighbour. Here, all is vague—the standards of reference being in most cases the local rupee or copper coin, themselves subject to variation; or of modern introduction, and capable of equalisation.

Thus, throughout the Maráthi states, the *ser* is referred to the Puna or Ankul rupee: in Gujarát, to the Beroch rupee: in Ajmir, to the Sálimsáhi; in Bengal, to the old Murehídábád rupee; all comparatively modern. In Madras, the coin of that presidency, or of Mysore, or Pondicherry, are appealed to; but more generally the English *avoirdupois* unit has become familiarised, as has been already stated, by the adoption of 25 lbs., to represent the commercial 'man.'

By perseverance, therefore, in upholding one common system for the whole of British India, or at least for the Bengal presidency, a system founded on the previous habits and institutions of the country; by connecting it (as has been done) with a rupee of general, and to be hereafter exclusive, circulation; by restricting Government transactions to this system, and affording facilities of adjustment by depositing standard weights in public offices all over the country;—there is some reason to hope that, eventually, the incongruous mass now prevalent

will gradually give place to the convenience of an universal and single species of weight.

There is another argument in favour of its feasibility, namely, that India does not, properly speaking, possess dry or liquid measures. Where these are employed, they depend upon, and in fact represent the ser or the man weight; the mention of measures has been accordingly omitted in the foregoing scheme for Bengal, leaving the value of any vessel of capacity to rest solely on the weight contained in it.

The mode in which this is effected for the 'dry measures' of South and West India is, by taking an equal mixture of the principal grains, and forming a vessel to hold a given weight thereof, so as to obtain an average measure. Sometimes salt is included among the ingredients.<sup>1</sup> Trichinopoly is the only place where grain is said never to be sold by weight. The markál<sup>2</sup> and para<sup>3</sup> are the commonest measures; the latter is known throughout India; in Calcutta it is called 'ferrah,' and is used in measuring lime, etc. which is still recorded however in mans weight.

Of the origin or antiquity of the Indian weights it would be out of place here to institute an inquiry; the ancient metrology of the Hindús has been fully described by Mr. Colebrooke, in the 'Asiatic Researches,' v. As with the coins, so with the weights, Southern India retained most of the names and terms properly Hindú, *pala*,<sup>4</sup> *tala*,<sup>5</sup> *sha*,<sup>6</sup> *bhárd*,<sup>7</sup> *kharí* (? *khará*), *laka*. Throughout the Moghul empire, on the contrary, the ser and man were predominant. The word 'man,' of Arabic or Hebrew origin,<sup>8</sup> is used throughout Persia and Northern India; but, as might be expected, it represents very different values in different places: thus the man of Tabriz is only 6½ lbs. avoird., while that of Páleda, in Ahmadnagar, is 163½ lbs.

It is probable that the ser, a Hindú weight (*setak*), was more uniform than the man, since it was founded upon the tolá (*tolaká*), which, with its subdivision, the *sewa*, must in very ancient times have been extensively known throughout commercial Asia. There can be little doubt that the 'tale or tael' and 'mace' of the Chinese are identical in origin. The variations of these weights may have been smaller, because their use was nearly confined to the precious metals and other

<sup>1</sup> "In Belay this is called the *sea-division measurement*; from the 'nine' sorts of grain used: rice, wheat, coolty, peasles, mernoomedon, oil seeds, Bengal grain, aumumoon, and nooleo. In Darwar, they take wheat, barley, barbury, roothee, moony, coral, jawarre, paddy, and moolkee."—Kelly's 'Metrology.'

<sup>2</sup> [Properly *Markál*, from the Tamil.]

<sup>3</sup> [NAL. *Para*.]

<sup>4</sup> [३. पल न. ३. ल. ३. तुला. ३. भार. ३. खारी.]

<sup>8</sup> The Hebrew maceh was equal to 12116 gra. tr. or 72.83 tolas. The Greek mina to 6244 gra. or 33.57 tolas.

articles of value; the *ser* is quoted at the highest denomination of this class of weights in one Sanskrit work. For gross produce a greater latitude was required, and larger *ser*s were introduced to suit the value of each article; the weight apparently, rather than the price, being made variable: while to prevent the ambiguity which might follow, it became necessary to define the *ser* employed as of 30, 40, 60, 72, 80, 90, or even as far as 120 *tolas*; and probably when the current coin began to vary from the original *tola*, the mention of this weight became obsolete, and reference was made direct to the *rupers* of the local currency. It is to meet this mode of expression that, in the following table, the value of every *ser* has been given in the standard *tola* of 180 grains.

The *man* of India may, as a genus, be divided into four different species: 1. That of Bengal, containing 40 *ser*s, and averaging about 80 lbs. avoirdupois. 2. That of Central India (*Málwá*, *Ajmir*, etc.) generally equal to 40 lbs. avoirdupois, and containing 20 *ser*s, so that the *ser* of this large portion of the continent assimilates to that of Bengal. 3. The *man* of Gujarat and Bombay, equal to  $\frac{1}{2}$  cwt. or 28 lbs. and divided into 40 *ser*s of a smaller grade. 4. The *man* of Southern India, fixed by the Madras Government at 25 lbs. avoirdupois. There are however many other varieties of *man*s, from 15 to 64 *ser*s in weight, which it is unnecessary to particularise.

Abú'l-Fadl defines the *man* of Akbar's reign to be 40 *ser*s of 30 *dáms*; each *dám* being five *tánts*. The *tánt* is in another place described as 24 *ratís*: the *másha* of eight *ratís* has been assumed, from the weight of Akbar's coins, to be 15.5 grs. troy. This would make the emperor's *man*—34  $\frac{1}{2}$  lbs. av., agreeing pretty well with that of Central and Western India. The *tánt*, as now existing in Bombay, is 72 grains; in Dharwár it is 50 grains; in Ahmednagar, 268 grains. Its present weight consequently affords no clue for the verification of the above estimate, however desirable it may be to determine the point. In one part of the '*Ayín-i Akbari*,' the *dám* is called 20 *máshas*, 7 *ratís*, which would increase the *man* to about 47 lbs. In the absence of better evidence, it may be safe to reckon it in round terms at one-half of our present standard *man*.

#### ORIGIN OF THE PRESENT TABLE OF INDIAN WEIGHTS.

In 1821, the Court of Directors called upon their commercial agents, collectors of customs, and other public officers of the three Presidencies, to procure and forward to England accurate counterparts of the standard weights and measures in use throughout their territories in the East. The order was promptly obeyed, and the



required models sent home, with certificates and explanations. The packages as they arrived were placed under charge of Dr Kelly, who was assisted in his examination and comparison of the weights by Mr. Bingley, Assaymaster, and of the measures by Mr. Troughton, both of whom had zealously co-operated in comparing the standards sent to the English Government from other parts of the world.

The dispatches accompanying the standards from India contained full information on the money and trade, as well as on the metrology of most places: this is embodied at length in the supplement to Kelly's 'Cambist,' whence it was subsequently collected in an octavo volume, entitled Kelly's 'Oriental Metrology.'

It is from these sources that the accompanying table has been drawn up, exhibiting in an abridged form the principal commercial weights of India and Asia. Most of the subdivisions peculiar to each place have been necessarily omitted for want of space, but, where possible, the formation of the *ser*, etc., from the local unit is mentioned. It may be generally assumed that the *ser* system follows the common scale, viz.:

16 *abhatāka* = 1 *ser*.

40 *sera* = 1 *man*.

20 *mans* = 1 *khandi*<sup>1</sup> or *māni*.

The use of a five *ser* weight also universally prevails under the name of *Panseri*,<sup>2</sup> *dhari*,<sup>3</sup> or *visi*.<sup>4</sup> The *dhari* from its name, however, seems to be properly a measure, and accordingly, while in *Mālwa* it is equal to 5 *sera*, in other places it is found of 4, 4½, 5½, 10, 11, and 12 *sera*. The terms *adholi*, *alibeli*,<sup>5</sup> half, *pāo*,<sup>6</sup> *powah*, 'quarter,' *adhpāo* 'half-quarter,' frequently occur: they explain themselves.

The only novelty in the present table is the insertion of the two last columns, expressing the equivalents of the local weights in the standard *man* and *tolā* of the British Indian system. The column containing their values in *avoirdupois* pounds, ounces, and drams is according to the London determinations of Kelly.

Where the *ser* only of any place is mentioned in the first column, the value of the *man* of the same place, expressed in parts of the standard *man*, is inclosed in parentheses to prevent mistakes: it may be remarked that the ratio of the *man* will answer equally well for the

<sup>1</sup> [From a. *खण्ड* *khand* - it is commonly written 'candy.']

<sup>2</sup> Written *panchaseru*, *panchar*, and *panchaser* in KELLY.

<sup>3</sup> [H. *دھری* *dhari*.] Written *dhare*, *dherra*, *dhaddie*, *dadda*, *dhadam*, in KELLY.

<sup>4</sup> Written *vis*, *vis*, *visay*, *visay*, *vis*, in KELLY.

<sup>5</sup> H. *अहिली*

<sup>6</sup> H. *पाव*

ser, it being understood that the subdivision into 40 sers holds for the mans of the two places compared. To reduce any local weight into the standard denomination, or into the bazar man of Calcutta, nothing more is necessary than to multiply by the number in the last column, and convert the decimals into sers, if so required, by means of the second table in page 108.

The column of 'tols per ser' will best express to a native the value of the weights of any particular locality; being the customary mode of estimation throughout the country.

In expressing the dimensions of the markal, the parra, and a few other dry or liquid measures; sometimes gallons and sometimes cubic inches have been introduced by Kelly. It may be convenient, therefore, to explain that, by the enactment of the 1st January, 1826, one imperial measure was established as a substitute for the variable wine, etc. and corn gallons of England, with their multiples and divisions.

This imperial gallon was made to contain 10 lbs. avoirdupois weight of distilled water, weighed in air at the temperature of 62° Far., the barometer standing at 30 inches. It has a capacity, therefore, of 277.274 cubic inches. Some of the most useful derivatives of this unit are here subjoined for the sake of reference.

Imperial dry and liquid measures.	Cubic inches.	Avoirdupois weight.	Indian weights.
1 pint, .....	34.659 c. i.	1 lb. 4 oz.	48.611 tolas.
2 = 1 quart, .....	69.318 "	2 lbs. 8 "	97.222 "
8 = 4 = 1 gallon, .....	277.274 "	10 lbs.	4.861 ser.
84 = 32 = 8 = 1 = 1 bushel, .....	1,284 c. i.	30 "	38.885 "
512 = 256 = 64 = 8 = 1 quarter, .....	10,209 "	640 "	7.777 mas.
2048 = 1024 = 256 = 32 = 1 chaldron	41,076 "	2560 "	31.111 "

The old wine gallon contained 231 cub. inches; the ale gallon 282 c. i., and the corn gallon 268.8 c. i.; whence are obtained the following multipliers to convert them into imperial measure, viz., .833, 1.017 and .969 respectively.

It will be remarked that the gallon nearly corresponds with the panseri or dhari of the Indian corn measures, while the bushel bears the same proximity to the man weight. Standards of the bushel, gallon, quart, and pint, are deposited in the Assay-offices of the three Presidencies.

The following is the scale of measures in use at Madras:—

		cu. inches.
	1 <i>walak</i> , <sup>1</sup>	= 11.719.
8 <i>walaks</i> ,	= 1 <i>padli</i> ,	= 93.752.
8 <i>padlis</i> , <sup>2</sup>	= 1 <i>markál</i> , <sup>3</sup>	= .750 = 27 lbs. 2 oz. 2 dr. water.
5 <i>markáls</i> ,	= 1 <i>parra</i> ,	= 3,750.
400 <i>parras</i> , <sup>4</sup>	= 1 <i>garra</i> , <sup>5</sup>	= 300,000.

The particulars of the Dry Measure of Ceylon are thus given in the 'Oriental Metrology.'

		gallon.	inch.	inch.
4 <i>cutchundoo</i> ,	= 1 <i>ser</i> ,	= 0.24	= 4.35 diam.	+ 4.35.
4.8 <i>ser</i> ,	= 1 <i>coornly</i> ,	= 1.15		
2.5 <i>coornlys</i> ,	= 1 <i>markál</i> ,	= 2.88		
2 <i>markáls</i> ,	= 1 <i>parra</i>	= 5.76	= cube of 11.56 inches.	
8 <i>parras</i> ,	= 1 <i>ammanam</i> ,	= 46.08	= 5½ bushels.	
9½ <i>ammanams</i> ,	= 1 <i>last</i> ,	= 432	= 9½ quarters.	

Thus it will be seen that there is no fixed rule as to the subdivisions and multiples of the *parra* or *markál*.

<sup>1</sup> [ *ولك*, vulgarly, *Olluck*.]

<sup>2</sup> [ *TAM. Padli*.]

<sup>3</sup> [ *TAM. Markál*. *مركال* = *markál*.]

<sup>4</sup> [ *TEL. Parra*: in page 110, note 3, incorrectly given as '*mal. Parra*.']

<sup>5</sup> [ Properly, *TEL. Garra*.]

TABLE of the Commercial weights of India, and of other trading places in Asia, compared with the British-Indian Unit of weight, and with the Avoirdupois system of England.

Place.	Description of Weight.	Value in British avoirdupois weight.	No. of standard value per ser, etc.	Value of same in British avoirdupois.
		lb. oz. dr.	Tola.	Mace.
Ankoni in Sumatra.	Tola, of 16 mace or 64 copangs.	grs. 148.2	0.790	...
	Catty — 100 talas or 20 bantals.	9 1 14½	82.370	...
	Bahar, of 200 catties.	423 5 0	...	5.1466
	Bamboo, liquid measure	5 10 10	120.890	...
Ahmedabad in Gujarat.	Tola — 23 valas, or 96 ratia.	grs. 193.440	1.075	...
	Ser (divided into ½ and ¼)	1 0 14½	41.001	...
	Man, of 40 aers.	42 4 13	...	0.5140
Ahmadnagar, in Aurangabad.	Tola — 12 mīshar or 96 gunjās	grs. 188.4	1.047	...
	Ser, com. wt. (of 50 Ankoni rs.)	1 15 8	70.802	...
	Man, of 40 aers.	78 16 12	...	0.9509
	Ser, of capacity (110 Ankoni rs.)	2 11 6	105.425	...
	Man, do. — 12 pailas — 48 aers.	130 2 0	...	1.5814
Amoyra, in the Mojeran.	Tola, of 16 mace.	grs. 455.35	2.329	...
	Bahar, of eleven.	496 12 0	...	7.2521
	Coyang, of six (2,500 catties).	3255 8 0	...	29.5632
Ahmed, Gujarat.	Man — 40 aers of 40 Baroch rs.	40 5 12	39.424	0.4928
	“ for grain — 40 aers of 41 do.	41 5 5	40.416	0.5052
	“ for cotton — 42 aers “	42 10 10	...	0.5306
	“ of 40 aers (of 36 daktaris).	27 3 8	26.464	0.3308
Anjar, Bhuj.	Kahā, measure — 64 mape.	3030 (Oz. 18.)	...	...
Anjengo, Travancore, M.	Khandi (— 35 taling <sup>1</sup> of 16th).	500 0 0	...	6.8656
	Man (20 in the khandi).	28 0 0	...	0.3402
Arkat, Malwa.	Pakkā ser, <sup>2</sup> of 24 pailas.	1 13 0	70.486	(0.8811)
	Pail, for grain — 47 pailas.	2 8 12	137.030	...
Amodh, Kalpi.	Ser, for cotton (see Kalpi).	1 8 0	68.336	(0.7292)
	“ grain, etc.	2 0 8	78.093	(0.9872)
Aurangabad in Sindh.	Tola — 12 mīshar, or 72 ratia.	grs. 187.5	1.041	...
	Ser, of 64 pice.	1 13 12	72.461	...
	Man, of 40 aers.	74 10 10	...	(0.9074)
Bagalkot, M.	Kachhā ser, <sup>3</sup> for groceries, oil, etc.	0 8 3	20	(0.2458)
	Pakkā ser, for grain (316½ c. i.)	2 0 11	133	(1.6616)
Bairseah, Mīwā.	Ser, of 86 Bhopal rapers.	1 14 12	73.892	(0.9362)
	Man, of 40 aers.	77 1 12	...	0.9371
Banda, Molucca.	Catty, of 3½ lbs. Dutch.	6 1 10	...	0.9740
	Bahar, of 100 catties.	610 0 0	...	7.4132
	Sockal, of nutmegs, 28 catties.	179 12 13	...	2.0767
Bangalore, in Mysore.	Kachhā ser, of 24 rapers.	0 70 0	24.504	(0.3028)
	“ man, of 40 aers.	25 0 0	...	0.3035
	Khandi, of 20 mace.	500 0 0	...	6.0764
	Pakkā ser, for grain, 84 rapers.	2 1 10½	81.840	(1.0230)
	Khandi, of 20 kolagas, or 160 aers.	336 12 4½	...	4.0926
	Markā, of 9, 10, 12, etc., to 96 aers.	...	...	...
Banjar Massin, in Burmah I.	Tola, of 16 mace.	grs. 614.4	3.418	...
	Pecal and catty (see China)	...	...	...
	Last, grain measure — 230 gantams	3956 10 10	...	37.2686
Bantam, Java.	Tola, for gold, musk, etc.	grs. 1055	5.866	...
	Bahar — 2 picals of 100 catties.	306 0 0	...	4.8124
	Coyang, of rice — 200 gantams.	8681 0 0	...	105.4983
Banawarra.	See Malwa.	...	...	...
Bardoloi, Sōrat.	Man, of 394 aers, 2 pice.	37 1 4½	...	0.4629

<sup>1</sup> Properly, TAM. Taldm. <sup>2</sup> پککا ser, <sup>3</sup> a full, complete, or correct ser.

<sup>4</sup> کچھا Kachhā, the converse of pakkā.

Place.	Description of Weights.	Value in Pounds and Pence per weight.	No. of standard weights per cwt. etc.	Value of one cwt. in Pounds, and decimal.
Baroda, Baruch.	Ser. (pergana,) 42 Balisabhi rs.	46 lb. 10 dr.	11.188	Mass.
	Man, of 42 sera.	44 9 10	...	0.5420
	Khandi, of 20 mana.	892 1 4	...	10.8411
	The town ser has 41 Balisabhi rs.	1 0 2.5	40.288	(0.5035)
	The Seemant man is of 40 sera.	42 7 10.6	...	0.5162
Batavia, Java.	Mark, of 9 rials.	grs. 422	2.844	...
	Bahar—2 pecks, of 100 catties.	406 14 0	...	4.9416
	Cuyong, of rice—3,500 lbs. Dutch.	3501 0 0	...	43.5139
	Timbang, of 4 pecks.	678 2 0	...	61.7123
	Kanar, kapak measure.	61 c. l.	...	...
Badrach, Bengal.	Ser, of 80 lb. wt. of bolus.	...	80.	1.0000
	Ser, of 60 lb. wt. for liquids, etc.	...	60.	0.7500
Belgaon, Muckla country.	Ser, of 24 Shapari rs. (174 grs.)	6 0 5	25.001	...
	Man, of 44 sera.	26 3 15	...	0.8189
Bellary, Mad. Col- led Distr.	Tola, of 20 Kastoriya tomans.	grs. 170.25	0.979	...
	Ser, of 21 Mysore rs. or talians.	0 0 7.4	20.621	(0.2678)
	Man, of 48 sera.	26 0 9	...	0.3953
	Man, for cotton (m <sup>1</sup> / <sub>2</sub> m <sup>1</sup> / <sub>2</sub> m <sup>1</sup> / <sub>2</sub> ).	26 0 4	...	0.3190
	Falmajee, grain measure, 112 lbs.	...	112.	...
Benares.	Markal chauran da—12 sera.	...	1008.	0.3150
	Tola, of 213 grains (m <sup>1</sup> / <sub>2</sub> ).	...	1.194	...
	Ser, of 104 lb. wt.	2 10 0	105.	1.3125
	Ser, of 103 lb. wt.	2 0 2	103.	1.2875
	Ser, of 96 lb. wt.	2 0 7	96.	1.2000
Bendoolen, Sum.	Tola, for gold, etc.—658 grains.	...	3.940	...
	Catty, of 16 talas.	1 2 5	56.696	...
Betalpaki, Arab.	Feud, of 10 mana.	20 0 4	...	0.9477
	Bahar, of 40 farsak.	818 10 0	...	0.9121
Bhopal, Bhoil.	Same as Mitha.	...	...	...
Birman Empire.	See Haganon.	...	...	...
Bombay.	Tank, of 24 ralis, (for pecks.)	grs. 72	0.400	...
Money weight.	Tola, (formerly 175 grs.)	grs. 180	1.000	...
	Ser, of 30 pias or 72 tanks.	0 11 31	27.222	...
Commercial weight.	Man, of 40 sera.	28 0 0	...	0.3402
	Khandi, of 20 mana.	560 0 0	...	6.8050
Grain measure.	Ser, of 2 tippons.	0 11 3.2	24.636	(0.3104)
	Pala, of 16 pails or adhatas.	44 12 12.6	...	0.5444
	Khandi, of 8 pails.	358 0 4	...	4.3553
	Pala, salt measure, 6 pails.	1607.6 c. l.	...	...
	Ser, for liquids, 60 Rom. rs.	1 5 8.1	60.	(0.7448)
Borneo.	See Banjar Massin.	...	...	...
Baruch, Gujari.	Man, of 40 sera, of 40 rs.	40 8 12	29.408	0.4028
	Man, for grain, 41 da.	41 0 5	...	0.5052
	Man, for cotton, 42 sera.	42 0 9.5	...	0.5397
	Man, Tabari—720 makhla.	7 10 10	29.885	0.0934
Baskire, Persia.	Man, of 24 rakhia Saphi.	116 0 0	...	1.4097
Bahra, Arab.	Man—6 clay of 400 dirham.	16 8 0	641.600	0.2903
Bughdad, "	Tala, of 10 masa, or 1800 kha.	grs. 590.75	3.282	...
Cachar, Tenquin.	(See the foregoing pages.)	lbs. 82½	80.	1.0000
Calcutta.	Grain weights or measures are de- rived from the others, thus—	...	...	...
	1 kunk—5 chhatika	...	35.	...
	1 rakh—4 kunkis—1½ ser.	...	90.	...
	1 palli—4 rakh—5 sera.	...	400.	...
	1 soalli—20 pallis—2½ mana.	lbs. 296½	5400.	2.500
Calicut, Malabar.	Ser, of 50 Surat rs.	0 8 2.7	19.849	(0.2481)
	Man, of 68 sera.	34 11 11	...	0.4220

Place.	Description of Weights.	Value in Tola- and Mauka weights.	No. of standard Tola for one Mauka.	Value of standard Tola in Mauka and dramma.
		Rs. M. S.	Tola.	Mauka.
Cambay, Malabar.	Same as Surat.			
Canton.	See China.			
Cape Town.	51½ Dutch—100 English weight.			
Carwar, Kanara.	Man, of 42 aers.	25 0 0	...	0.3159
Ceylon.	See Colombo.			
Channador, in Ah- madnagar.	Ser, of 74 Ankus m. 10 mds.	1 15 8	71.702	(0.3968)
	Ser of capacity—72 tanks.	2 5 7	90.995	...
	Man, of 54 aers.	100 12 0	...	1.8209
China.	Tale, see page 16 (=579.84 gra.)	0 1 6	3.231	...
	Canry, of 16 tale.	1 5 6	51.586	...
	Fossil, of 100 cattin.	133 5 6	...	1.4087
Cochin, Malabar.	Man, of 25 lbs. of 42½ aers.	27 2 11	...	0.3301
Coinimbatour, Mysore.	Man, of 40 aers.	24 1 0	...	0.2923
	Palam, (of 10 pagodas)	grs. 528	2.936	...
	Tola, for cotton.	7 6 0	291.660	...
Colachy, Travancor.	Man—125 palams, of 100 gra.	18 12 13	...	0.2284
	Khandi, of 20 mans.	376 1 2	...	3.6703
Colombo, Ceylon.	Khandi on Bahur.	500 0 0	...	6.0764
	Gavon, (82 aers. 2 aers. 10½ lbs.)	9950 6 0	...	142.4021
	Mackel, dry man—10 aers.	grs. 2.58	...	...
	Pura, do.	" 5.70	...	...
Comercilly, Ba.	Ser, for metals, 55 an. wt. (other aers of 60 and 78 do.)	1 7 9	56.	(0.7160)
Coolpahar, Calp.	Ser.	2 1 6	126.000	(1.6000)
Cosimbhar, Ba.	Sers, of 76, 78, 80, and 82.16 ad.			
Calp, Agra.	Ser, for sugar, metals, grains.	2 1 15	82.487	(1.0810)
	Ser, for gds.	2 6 3	92.916	(1.1602)
	Ser, for cotton.	2 6 12	94.184	(1.1773)
	Ser, for grains, wholesale.	2 7 5	93.562	(1.1914)
Dharsar, Bom.	Kachcha ser, of 72 tanks.	0 8 34	20.0	(0.2488)
	Pakki ser—110 Mad. m.	2 15 11	116.0	(1.4498)
	Dharg, liquid measure, 12 aers.			
Dewas, Malwa.	Ser, of 50 Ujain rupsak.	1 15 10	76.866	...
	Man, of 64 aers.	137 8 2	...	1.6712
Dindar, Ahmad.	Ser, of 76 Ankus m.	1 15 15	72.765	(0.8096)
	Ser, of capacity, 72 tanks.	2 7 6	95.778	...
	Man, of 64 aers.	157 10 0	...	1.6136
Dungurpar.	Ser, of 52 Sakwas m.	1 4 0	48.725	(0.6090)
	Man, of 16 aers.	80 1 14	...	0.6050
Dakhan, Puna.	Ser, 72 tanks or talas (86 Ank. m.)	1 15 8	76.835	...
	Man, of 11½ aers, for gds, etc.	34 19 4	...	0.2909
	Man, of 14 " for metals.	37 0 9	...	0.5355
	Pala of 12½ " for iron, etc.	230 9 2	...	2.8749
	Man, of 48 " for grain.	94 9 8	...	1.1494
Fatsoe, Coc. Chi.	Same as in China.			
Farrukhabad,	Ser, wholesale 119 sh. wt. 2½		110.	(1.3625)
Agra.	" retail 94		94.	(1.1750)
	" for spices, 72.		82.	(1.0250)
Gerauli, Kaipi.	Ser, for all purposes.	1 15 6	75.460	(0.9431)
Ghoushon, "	Ser, for wholesale.	2 2 0	82.638	(1.0330)
Goa, Malabar.	Quintal, of 4 aroton.	129 5 5	...	(1.8717)
	Khandi, of 20 mans.	495 0 0	...	6.0150
Gamron, Persia.	Man, Tabri. (Tabetri?)	6 12 0	262.400	0.6820
	Man, Shahi (=2 Taberi)	15 8 0	524.800	0.1640

† These are marked in Kelly 11 and 14 Farrukhabad Shahi weight, which must be a mistake for 110, and, probably, 94.





Place.	Description of Weights.	Value of Piece with measure and weight.	No. of pieces in value per wt. oz.	Value of piece in value per wt. oz.
Madras.	Padi, oil measure = 6 ollaks, or 1000 lbs. 9276	1000 lbs. 9276	...	...
	Panna, for chumie = 5 markils. 3750	5 markils. 3750	...	...
	Mangolia, for pearls = 6 grains.	6 grains.	...	...
	18 Mal. chows = 50 Bom. chows.	50 Bom. chows.	...	...
Madurā, Carn.	Ser. of 80 Madurā pagodas	80 16 4	24.913	...
	Man, of 39.244 ser.	25 0 0	...	0.3038
Malabar.	Pollan, of 8 Pundick. rs. 1 kila.	8 16 4	9.022	...
	Tulam, of 40 ser.	23 3 1	...	0.2817
Malacca, Malay.	Catty, of 20 lamsals, for gold.	2 0 12	79.000	...
	Pecal = 1000000 ser. of 16 talas	123 0 0	...	1.0407
	Pahar, of 3 picals.	405 0 0	...	4.9219
	Gastan, measure.	0 6 0	252.775	...
	Kip, of tin = 30 lamsals.	40 11 0	...	0.4346
Malda, Ben.	Ser. of 100 rs. wt. (72 c. l.)	2 9 0	100.	(1.2450)
	" 80 (at Mughalbari)	2 7 0	95.000	(1.1958)
	" 62 (at Jelpur)	2 1 14	82.330	(1.0292)
	" 60 (English bar)	2 0 14	79.942	(0.9993)
Māliwa, Central India.	Tola, of 12 viklas	12 0 0	1.055	...
	Ser. of 44 Bāliwāli rs.	2 0 6	76.000	...
	Man, of 20 ser.	30 7 8	...	(0.4018)
Mangalore, Mal.	Ser. of 24 Bomlayas (42.79 grs.)	0 9 13	23.850	...
	Man, market, of 40 ser.	28 2 4	...	0.3419
	" Company's (16 rs. bar)	26 6 15	...	0.3400
	" for sugar = 40 ser.	24 7 9	...	0.3072
	Ser. of capacity = 64 Bom. rs.	...	84.000	...
Manilla, Phil. Is.	Spanish weights and (Chia. pecul.	...	...	...
Masaka, Red Sea.	Radika, of 12 viklas (4000 grs.)	0 10 15	26.035	...
Masulipatan, M.	Tulam = 20 chumies.	20 0 0	0.005	...
	Kachcha ser. and man, at Madras.	0 11 4	27.342	(0.3418)
	Pakkā ser. = 40 ser. of 2 lbs.	60 0 0	...	0.9722
	Ser. of 90 Madras pagodas	0 8 0	21.875	(0.2734)
	" 72 " " (for metal)	0 12 0	29.160	(0.3640)
	" 96 " " (for cotton)	0 8 0	20.210	...
	Markil, grain measure, 12 ser.	12 0 0	...	...
	Gastan, " 4000 "	4000 0 0	...	...
Mauritius.	Ton, of sugar = 2000 French, etc.	2000 0 0	...	26.2500
	" " grain and coffee = 1400 "	1400 0 0	...	18.3750
	" " cloves = 1000 "	1000 0 0	...	13.1250
	" " cotton = 750 "	810 0 0	...	0.8437
Mocha, Arab.	Man, of 10 viklas	2 5 0	128.640	0.9402
	Bahar = 15 fassils, of 10 man.	450 0 0	...	5.4697
	Tonno, measure of rice	168 0 0	...	2.0417
	Qahle, liquid measure = 7 gall.	10 0 0	...	0.2187
Moluccas.	Ser. Amboyna and Banda.	...	...	...
Mundisar, Mol.	Ser. of 22 Bāliwāli rs.	2 3 7	88.240	(1.0781)
	Man, of 15 ser. (7).	34 4 4	...	0.4042
Mysor, Province.	Ser. = 24 Mysor rs. of 179 grs.	0 9 13	23.850	(0.2981)
Nasauk, Ahmad.	" of 70 Ank. rs. 1 mikhla	1 15 4	37.030	(0.9504)
	" capacity, 99 Ank. rs. 2m.	2 7 2	95.018	(1.1877)
Natal, Sumatra.	Tompang, (Bom. wt.) 20 catties	60 0 0	...	0.9722
	Catty wajan (for do. and camphor)	4 0 0	155.555	...
	Tala, for precious metals	384 0 0	3.244	...
	Sukat, grain measure = 12 pakkā	12 0 0	...	...
Negapatam, Car.	Ser. of 8 pallas	0 9 10	23.970	...
	Man, of 41,558 ser.	25 0 0	...	0.3038
New Hechly, M. Doh.	Kachcha ser. = 201 Mal. rs.	0 8 6	20.352	(0.2394)
	Pakkā ser. = 1051 do.	2 11 13	166.488	(1.3311)

Place.	Description of Weights.	Value in Rupees and Annas.	No. of Maunds per catty.	Value of Maund, rupees and Annas.
New Hoobly, Dooly Nulva, Malwa.	Dharu countries 12 ser.	12 0 0	170	...
	Ser. of 80 Ujjain rs.	1 15 10	20,864	...
	Man. of 20 ser.	39 5 8	...	0.4805
Nolrand, Mal.	Kachhā ser — 20½ Mal rs.	0 5 8	20,756	(0.2592)
Dooly.	Pakkā ser — 110½ M. rs. 90.6 c.	2 13 5	110,310	(1.3770)
Okalesur, in Baruch.	Ser. of 28 Baruch rs.	0 15 6	37,483	...
	Man. of 40 ser.	28 5 12	...	0.4685
	Perganna ser, 20½ Br. rs.	1 0 2½	29,300	(0.5918)
	Man. 40 ser.	40 5 12	...	0.3912
Chautwara, Mal.	Ser. of 81 Salimnābī rs.	1 15 2½	75,910	(0.0489)
	Man. of 28 ser.	54 10 8	...	0.6612
Omro, in Candia.	Man. of 40 to 44 ser.	25 0 0	...	0.3098
	Man. grain measure.	1 15 10	...	...
Ujjain, Malwa.	Ser. of 80 Ujjain rs.	1 15 10	16,800	(0.9008)
	Man. of 16½ ser.	25 5 12	...	0.4064
	Man. of 12 man.	400 5 12	...	4.9055
Paishul, Sūrat.	Man. of 45 ser, 8 pan Sūrat.	45 1 0	...	0.5409
Palankshi, Car-nātib.	Tolan, of 100 palank (1 a man.)	12 5 0	...	0.1519
	Pail, for metals.	4 15 0	192,014	0.0000
	Marakkā, retail = 1½ gail, reverse.	...	...	...
Palimbang, Sum.	Catty, of 10 talas.	29, 8494	52,745	...
	Bally, of 50 cantangs.	81 0 0	...	0.9858
Palloda, Ahmed.	Ser. of 78 Ank. rs. 10½ Sūrat.	1 13 2	75,651	(0.9480)
	of capacity, 103½ Ank. rs.	2 5 13	99,195	...
	Man. of 14 ser.	183 4 0	...	1.9859
Pandri, Kalpi.	Ser. of 80 Salimnābī rs.	2 11 12	106,840	(1.3292)
Panwari, "	" of 76½ Ank. rs.	2 5 2	82,043	(1.0369)
Pernair, Ahmed.	" of capacity, 93 rs. 7 m.	2 5 2	75,296	(0.9468)
	Tola, of 12 māsah.	2 5 2	90,233	(1.1279)
Pitua, Bihār.	Tola, of 12 māsah.	2 5 2	1,101	...
	Ser. from 45 to 51 sh. wt.	...	86.	1.000
Pegu, Birma.	Tola, 100 to the rā.	27½	1,368	...
	Khandi, 160 sh. reckoned at	600 0 0	...	0.0764
	Basket, rice measure, 16 sh.	58 0 0	...	0.7048
Persia.	Man of Shirā = 600 māsah.	12 10 14.4	403,172	0.1441
	Man of Tabriz, 300 sh. 100 dirhs.	0 5 7.3	240,530	0.0770
	Arsha, corn measure, 2 māsah.	...	...	...
Postipgarh, Aj-mir.	Ser. of 80 Salimnābī rs.	1 14 13	74,907	...
	Man. of 20 ser.	38 8 14	...	0.4686
Poudicherry, Car.	Ser. of 24½ Poo. rs. = 73½ tan.	0 9 11	23,622	...
	Man. of 8 sh.	25 14 5	...	0.3146
	Garre of grain, = 100 māsah.	134	...	...
Penang.	Malay pound, of 100 catties.	142 10 10	...	1.7338
	Bakar, of 3 picals.	128 0 0	...	5.2013
	Ganting measure, = 4 chupaks.	27.165	...	...
Puna.	See Dekhan.	...	...	...
Quilon, Trav.	Olundā, or old Dutch pound	1 1 8	42,635	...
	Man. of 25 old Dutch pound.	27 5 8	...	0.3225
	Tolas, of 100 pol. for cotton.	16 11 5.6	...	0.2923
	" for spices.	15 9 7.3	...	0.1804
Rangoon, Ben.	Ser. of 62, 64, and 80 sh. wt.	...	80.	1.000
	Hght. for pail = 3 ser. of 87	...	319.	(0.7750)
Rahori, Ahmed.	Ser. of weight = 77 Ank. rs.	1 14 5½	73,790	(0.9223)
	of capacity = 115½ sh.	2 13 8	110,666	(1.3833)
Rangoon.	Ys of 100 thak.	3 5 5	149.	...
	Khandi, of 150 sh. reckoned.	350 0 0	...	8.0764
	Tan, or basket of rice = 16 sh.	58 4 0	...	0.7078

Place.	Description of Weights.	Value of the unit in pounds sterling.	No. of stand- ard units per cwt. etc.	Value of the unit in rupees and annas.
Ranchhori, Ah- madnagar.	Ser. of 74 Aikwa re. .... " of capacity, 102 do. .... Man. of 64 sera .....	1 12 23 3 8 5 160 13 8	70.901 97.750 ...	(0.8853) ... 1.9548
Rangpur, Ben.	Ser. of 60, 64, 74, 80, 90, and 100 tolas; the standard ser ...	...	80.	1.000
Ratnam, Malwa.	" of 84 Shikharshi re. .... Man. of 20 sera .....	2 0 6 46 7 9	78.680 ...	... 0.4918
Salangor, Malay.	Bulat, of 240 catties .....	324 0 0	...	3.9374
Sankaridurg, Car- natic.	Ser. of 8 pawns for perranams. Man. of 41.250 sera .....	0 3 12 23 0 0	23.698 ...	... 0.3038
Santipur, Ben.	Ser. of 60, 80, 84, and 96 to- las; also factory weights. ....	...	80.	1.000
Seringapatam.	Kachhal ser. of 24 mital re. .... " man. of 10 sera .....	0 0 11 24 4 8	23.090 ...	... 0.2950
Siam.	Pakka ser. of grain; 84 Sol re " bulaga = 16 sera .....	2 1 15 33 15 12	92.601 ...	... 0.4130
Singapore, Malay.	Perul = 90 catties of 20 talas ... Rumal, for gold .....	129 0 0 grs 832	... 4.022	... 1.6077
Sinkell, Narmada.	Perul of 190 catties, (see China). Trompong, of 20 cots. for benzoin	...	...	...
Sole, Souda.	Perul, etc. as in China.	5 8 0	30.110	...
Sonamuki, BL.	" as in China.	...	...	...
Suez, Red Sea.	Ser. of 48, 10, 60, 72, 72, 72, and 82.10 tolas; stand. ser. ....	...	80.	1.0000
Surat, Gujarat.	Buttola, of 144 aunas .....	1 4 0	48.610	...
Talicherry, in Malabar.	Quintal varies from 110 to 140 lbs. Tola, of 12 masha .....	grs 167.2	1.040	...
Teruata, Malacca.	Ser. of 35 tolas .....	0 10 0	30.458	(0.4557)
Tranquibar, Cor.	Man. of 40 sera .....	37 8 0	...	0.4558
Travancour, M.	Ser. of 20 Surat rapens .....	0 8 2	10.889	(0.2481)
	Man. of 64 sera .....	32 11 0	...	0.3972
	Perul, of 100 catties .....	190 3 8.8	...	1.7826
	Man. = 60 lbs Danish .....	74 12 0.5	...	0.9088
	Tufam, of 20 pounds .....	10 14 11	...	0.2420
	Khandi (30 tolas), for purchaser " (20 masha), for sale .....	597 8 10 500 8 2	...	7.2618 6.0825
	Pura, grain measure .....	grs 2	...	...
Trichinopoly, Carnatic.	Pakka ser. = 27 tolas .....	1 14 8	74.182	...
	Man. = 12.114 sera .....	25 0 0	...	0.3038
	Ser. for metals = 4167.7 grs. .... Maenikhi, gr. measure, 1½ gall. See Colombo.	0 3 6	23.167	(0.2806)
Trincomali.	See Ararat.	...	...	...
Yellor.	See Ararat.	...	...	...
Vineyapatam.	See Maralapatam.	...	...	...
Wallajahad.	See Ararat.	...	...	...

## LINEAR MEASURES.

Notwithstanding the boast of Abū'l-Fazl, that, among other beneficial effects of Akbar's administration, he had fixed one standard of linear measure for the whole of India, we find at the present day as great irregularity in this branch of our subject, as could have prevailed in his day, or rather much greater; on account of the semi-introduction of European measures in the British Indian territories, and in the Dutch and Portuguese settlements before them.

There is this peculiarity in the linear systems—that the basis of all is the same, the cubit or human fore-arm; and this unit is found in Oriental countries, as in those of the West, divided into two spans, and 24 finger's-breadths. Thus, under the Hindū princes, the *hath* (in Sanskrit *hasta*) was equal to two *vitati* or 'spans,' and to 24 *angula* (*angula*). The *angul* 'finger' is divided into 8 *jau* (s. *yava*) or 'barley-corns.'

The subdivisions of the *yava*—proceeding downwards to the *paramāṇu*, or 'most minute atom,' according to the arithmetical works of the Hindūs—are, of course, theoretical refinements which it is unnecessary to notice: a full account will be found in Colebrooke's treatise in the 'Asiatic Researches' (epitomised above, vol. i. page 211). Proceeding upwards, four *hath*s or 'cubits' are equal to a *danda*, or 'staff;' and 2000 *dandas* make a *krosa*, or *kos*, which should be, by this estimation, 4000 yards English, or nearly 2½ miles. The *kos* is generally for convenience now called equal to two English miles. Four *krosa* = one *yojana*, nearly ten miles. The 'Lilāvati' also states that 10 *hath*s make one *hanu* or 'bamboo,' and 20 *hanu*s in length and breadth = 1 *viranga* of arable land.

That the cubit was of the natural dimensions (of 18 inches, more or less) can hardly be doubted; indeed, where the *hath* is talked of, to this day, among the natives, the natural human measure is both understood and practically used, as in taking the draft of water of a boat, &c. In many places also, both in Bengal and in South India, the English cubit has been adopted as of the same value as the native measure.

The *gaz*, or yard, now in more general use throughout India, is of Muhammadan introduction: whether this is derived also from the cubit (for the Jewish cubit is of the same length) is doubtful; but, like the *hasta*, it was divided into 24 *tasas*, or 'digits,' corresponding more properly to inches.

Abū'l-Fazl, in the 'Ayin-i Akbari,' gives a very full description of the various *gaz* in use under the emperors, as compared with the earlier

standards of the Khalifa. He expresses their correct length in finger's-breadths, which may be safely taken as three-quarters of an inch each.

For facility of reference, his list is here subjoined, with the equivalents in English measure at this rate:—

ANCIENT GAZ MEASURES ENUMERATED IN THE 'AYIN-I AKHARI.<sup>1</sup>

The Gaz-muda of Hārūn-al-Rashid — 24½ (some MSS. have 25½) fingers of an Abyssinian slave, the same used in the Nilometer of Egypt <sup>2</sup>	English.
The Kabah gaz, of Ibn Abīlīsh — 24 fingers	= 18½ in.
The Yūsufi gaz, of Baghdad — 25 " "	= 18½ "
The small Hashemah gaz <sup>3</sup> of Abū Mūsā Akbarī — 25½ fingers	= 21½ "
The long " " " " Mamūr 'Abbāsī ... = 29½ " "	= 22½ "
The Umarīah gaz of the Khalīf Umar — 21 " "	= 18½ "
The Māmūniyah gaz of Māmūn 'Abbāsī — 20½ " "	= 15½ "
The gaz Masāhat — 28 " "	= 21 "
Sikandar Lodi's gaz of 41½ silver Sikandari <sup>4</sup>	
Nilometer, modified by Humayūn to 42 " "	= 22 " "
This was used in land measurements till the 31st year of Akbar.	

<sup>1</sup> The cubit of the Nilometer is supposed to be the same as that of the Jews, which is exactly two feet English. — If so, the 24 digits will be, precisely, inches. Vidney, however, makes it 20½ French, or 22 English inches. Some allowance must probably be made for the broad hand of a negro, but the other measures will not be affected by the same error, as they must be referred to the ordinary delicate hand of a native of Asia.

<sup>2</sup> These two are also called the Gaz Maḥīk and Gaz Zillīsh, because Zīd, the adopted son of Abū Saffān, made use of them for measuring the Arabian Irak.

<sup>3</sup> [Abū-L-Fazl, in noticing the various descriptions of yard-measures introduced at different times into Hindustān, makes incidental mention of certain coins designated Sikandariya—upon the basis of a given number of the diameters of which the Gaz of Sikandar Lodi was formed. The class of money described ('Num. Chron.'), evidently furnished, among their other uses, the data for this singularly-defined measure. Any eye in Indian numismatology, under whose eye many specimens of this mintage may chance to pass, cannot fail to remark that, imperfect as their configuration undoubtedly is, as compared with our modern machine-struck money, yet that they hold a high place among their fellows in respect to their improved circularity of form, and general uniformity of diameter—points which had certainly been long regarded in the earlier produce of the Delhi mints.]

The passage alluded to is to the following effect:—

سلطان سکندر لودی در هندوستان نیز کرب در میان آورد و آنرا  
چهل و یکتو نیم اسکندری اندازه گرفت و آن مین نقدیست گرد  
نقره امیز جست اشیائے نیم دیگر افزود بچهل و دو قرار گرفت<sup>4</sup>

With a view to make these coins, even at the present day, contribute towards our knowledge of the true length of this Gaz—which is still a *vacante questio*, I have carefully measured a set of 42 of these pieces, arranged in one continuous line: the result arrived at is, that the completion of the 20th inch of our measure falls exactly opposite the centre of the 42nd coin.

The specimens selected for trial have not been packed, beyond the rejection of five

[Page 107 Sir H. M. Elliot's MS. copy of the 'Ayin-i Akbari.' See also p. 355, vol. i., Gladwin's translation.]

		<i>English.</i>
The Akbari gaz, for cloth measure .....	= 46 fingers .....	= 34½ in.
The Ilāhī gaz, established by Akbar, as the sole standard measure of the empire .....	= 46 " .....	= 30½ " <sup>1</sup>
The Akbari bighā, of 3600 square gaz = 2600 square yards = 0.538, or somewhat more than half an acre, on the above estimation.		

The Ilāhī gaz of Akbar was intended to supersede the multiplicity of measures in use in the 16th century; and, in a great degree, it still maintains its position as the standard of the Upper Provinces. In general, however, different measures are employed in each trade, and the cloth-merchant, in particular, has a distinct gaz of his own. Thus the cloth gaz has assimilated in many places to two hiths, or one yard; and the frequent employment of English tape-measures, as well as carpenter's two-foot rules, will ere long confirm the adoption of the British standard to the exclusion of the native system, for the linear measure of articles in the bazar.

The true length of the Ilāhī gaz became a subject of zealous investigation by Mr. Newham, Collector of Farrukhabād, and Major Hodgson, Surveyor-General, in the year 1824, during the progress of the great revenue survey of the Western Provinces, when it was found to be the basis of all the records of land measurements and rents of Upper India. As might have been expected, no data could be found for fixing the standard of Akbar with perfect accuracy; but every comparison concurred in placing it between the limits of 30 and 35 English inches; and the great majority of actual measures of land in Rohilkhand, Dillī, Agra, &c., brought it nearly to an average of 33 inches. Mr. Duncan, in the settlement of the Benāres province in 1795, has assumed 33.6 inches to the Ilāhī gaz, on the authority, it may be presumed, of standards in existence in the city, making the bighā = 5156 square yards.

The results of the different modes of determination resorted to in 1824-5, so characteristic of the rude but ingenious contrivances of the natives, are curious and worthy of being recorded. Maj. Hodgson made the length of the Ilāhī gaz—

very palpably worn pieces out of the total 48 of Mr. Bayley's coins, which were placed at my disposal.

The return now obtained I should be disposed to look upon as a little below the original standard, notwithstanding that it slightly differs from the determination of the measure put forth by Princep; but I must add that Princep himself illustrated his own materials, and was evidently prepared to admit a higher rate than he entered in his leading table.—E. T.]

<sup>1</sup> Should the length of this gaz be taken at 32 or 33 inches, proportionate corrections must be made in the other measures.

From the average measurement of 76 men's finger's-breadths.....	= 31.55 in.
From the average size of the marble slabs in the pavement of the Taj at Agra (said to be each a Shāh-jahānī gaz of 42 fingers ?).....	= 33.68 "
From the side of the reservoir at the same place, called 24 gaz .....	= 32.54 "
From the circuit of the whole terrace, 432 gaz (?) .....	= 35.80 "
Mr. Newham, from the average size of 14 Chār-jāri rapese, supposed to be each one finger's-breadth, makes it .....	= 29.20 "
From the testimony of inhabitants of Farrukhābād.....	= 31.50 "
From statement in the 'Ayn-i Akbari,' of the weight of the cubic gaz of 73 kinds of timber (this would require a knowledge of the weights)	
Halhed, from average measurement of 246 barley-corns .....	= 31.84 "
From $\frac{1}{4}$ sum of diameters of 40 Manshri pipe .....	= 32.02 "
From $\frac{1}{4}$ of 4 human cubits measured on a string .....	= 33.70 "
From average of copper wires returned by Talukdars of Murādābād as counterparts of the actual measures from which their bighās were formed .....	= 33.50 "
Mr. Duncan, as above noticed, assumed the Ilāhī gaz at Benares .....	= 33.00 "
In Barūt, Bulandshahr, Agra, as in the following table, it is .....	= 32.5 "

It is natural to suppose that the gaz adopted for measuring the land should vary on the side of excess, and probably all the above, thus derived, are too long. The Western Revenue Board, thinking so many discrepancies irreconcilable, suggested that the settlements should everywhere be made in the local bighā, the surveyors merely noting the actual value of the Ilāhī gaz in each village, and entering the measurement also in acres; but the Government wisely determined rather to select a general standard, which should meet as far as possible the existing circumstances of the country. Thus the further prosecution of the theoretical question was abandoned, and an arbitrary value of the Ilāhī gaz was assumed at 33 inches, which was in 1825-6 ordered to be introduced in all the revenue-survey records, with a note of the local variation therefrom on the village maps, as well as a memorandum of the measure, in English acres. Mr. Holt Mackenzie thus describes the convenience which the adoption of this standard (sanctioned at first only as an experiment and liable to reconsideration) would afford in comparisons with English measures:—

\* Taking the jureeb (side of the square bighā) at 60 guntchs, or 60 gaz, the bighā, as will be 3600 square gaz, or 3925 square yards, or five-eighths of an English acre (8 roods, 5 perches). The jureeb will be equal to 3 chains of 11 yards, each chain being 4 guntchs. In those places where the jureeb is assumed at 54 gaz square, it would equal  $4\frac{1}{2}$  chains, giving 3150 square yards (or 2 roods, 10 perches). In either case the conversion from one to another would be simple, and the connection between the operations of the surveyors and the measurements of the revenue officers would be easily perceived.\*



This convenient bighá of 3600 square Iláhi gaz, or 3025 square yards, or five-eighths of an acre, may be now called the standard of the Upper Provinces. It is established also at Patna, and has been introduced in the settlements of the Sagar and Narbadda territories.

The notice of land measurement seems altogether to have been overlooked in the returns from the Bengal revenue officers, to the Hon. Court's circular; so that, with the exception of the facts gleaned from the official correspondence above alluded to, and other information hastily acquired from private sources, the present table exhibits nearly a blank in regard to the bighás of Bengal Proper, Bihár, Cuttack, and Central India. Rennell's general estimate of the area of Bengal in bighás of 1600 square yards merely followed the measure in use at Calcutta. The permanent settlement in these provinces left the land unmeasured, and obviated the necessity of an actual survey. In general terms, however, the bighá of the Bengal provinces may be assumed at 1600 square yards, or about one-third of the English acre, and a little more than half of the up-country bighá.

In Madras, Sir T. Munro established a measure (called ground or *mdai*) of 60 x 40, or 2400 square feet, of which 24 make a *kdai* = 57600 square feet, = 6400 square yards, or exactly four Bengal bighás. The Madras *kdai* is to the English acre as 1 to 1.3223, or as 121 to 160 nearly. In the jágir, the *adi* or Malabar foot is used, which is 10.46 inches; 24 *adis* = 1 *kdai*, and 100 square *kdais* = 1 *mdai*, or nearly an English acre. The common *kali*, however, is 26 *adis*, or 22½ feet, which makes the *kdai* = 1 acre, 28¼ perches.

Of the land measures of the Bombay Presidency, Kelly's tables are altogether silent; but as the cubit and gaz are stated to correspond with 18 and 27 inches respectively, doubtless the square measure has also been brought to agree with some aliquot or multiple of the English acre.

It is much to be regretted that the information on this most important point should have proved so defective; but in justification of the officers to whom the Court's circular was addressed, it should be stated that the draft of instructions did not specifically allude to square measures, merely directing that 'for measures of length, one that is nearest to the cubit or ell, should be selected as the model to be sent home.'

TABLE of Linear and Square Measures of India

Place.	Denominations.	Value in English meas.
Agra, Presidency	Standard Hindi gas, measured at .....	33 inches.
	Standard high of Western Provinces = 60 × 60 gas = 3600 gas .....	3635 sq. yds. ( $\frac{2}{3}$ acre).
	Land gas varies from 31.5 to 33.25 sq. ....	32,625 inches.
Ahmedabad .....	Gas, 60 cloth .....	27.75 "
	" " " Volvul .....	34.25 "
	" " " artificers .....	23.33 "
Ahmednagar .....	Hath of 14 inches .....	14.00 "
	Gas, of 1½ hath .....	24.50 "
Ajigarh .....	" from 31.5 to 33.4 .....	33.00 "
Molucca .....	Covid, or rubit .....	18.12 "
Ahmed .....	Gas .....	27.12 "
Anjar .....	" of 24 tacks .....	26.40 "
Aurangabad .....	" " 16 gasses .....	32.00 "
Bagulota .....	" " 24 tacks .....	32.87 "
Bangalore .....	Hath = 10.1 inches .....	26.00 "
Bantam .....	Hath .....	18.00 "
Baroh .....	Gas, from 22.0 to 23.4 .....	32.90 "
Bareilly .....	" of 24 tacks .....	27.12 "
Batavia .....	Hil = 77½ inches, Foot = .....	12.50 "
Batavia .....	Cubit for hath .....	18. "
Batavia .....	Gas, tailor's .....	33. "
Batavia .....	" weaver's .....	42.5 "
	" cloth-measurer's .....	37.5 "
	" architect's (masonry) .....	25.33 "
Benares .....	High, by Reg. II, 1705 .....	3135 square yards.
	Hath, or two cubits .....	36 inches.
Batavia .....	Gas .....	27 "
Bombay .....	Hath = 18 inches, the gas = .....	27 "
Bundelkhar .....	Gas (originally 32) .....	31.75 "
Baroch .....	Gas .....	27.35 "
Bussier .....	Wool .....	89.6 square inches.
	High = 20 wool .....	2 rods, 20 perches.
	Half gas, Shikhi .....	30 inches.
Barrak .....	" " Bussier .....	18.4 "
	Allego yard .....	24.4 "
	Bughad .....	31.0 "
Calcutta .....	High = 20 kathi of 16 shaktis .....	1600 square yards.
	Kathi .....	720 sq. feet = 80 sq. yds.
	Shakti .....	45 " = 5 " "
Calicut .....	Gas .....	28.6 inches.
Kalpa .....	" = 16 gas .....	40 "
Cambay .....	" .....	28 "
China .....	Moupa of 600 square rods .....	2 English acres.
	Mathematical foot .....	13.12 inches.
	Builder's .....	12.7 "
Chittagong .....	Tailor's .....	15.33 "
	200 lin = 1 degree .....	62,166 miles.
	Nal, or bamboo, of 6 hath = .....	12 feet.
(Mag. land mea- sures) .....	Ganda, of 4 kathi = 2 × 5 mals = .....	90 sq. yds.
	Kant = 20 gandas = 12 × 10 mals = .....	1920 sq. yds.
	Dun = 16 kantis .....	29720 sq. yds. or 6.35 acres.
	Shikhi measures, 4 times greater .....	8-fold more now.
Kasimbazar .....	Hath .....	18.12 inches.
Dharwar .....	Hath, for cotton cloth .....	19.36 "
	Gas .....	32.75 "
Dihli .....	Average high .....	3500 sq. yds.
Etawa .....	Gas from 32 to 33 .....	32,500 inches.
Farrukhabad .....	Cloth gas = 12 mals (pals) = 48 angul .....	36 "
	Hath, or cubit = 24 angul or fingers .....	18 "
	Land gas 10½ mals or 42 fingers = 1 14 gas on cloth, 2 of 16 .....	31½ "

Place.	Denomination.	Value in English units.
Parrakkābād ...	High, of 20 tips = 38.00 (Nāh) gas.	27.64 square yards.
Gas ...	Portuguese Covado	25.65 inches.
Gāmm ...	Gas, 92 = 100 English yards	38.7 "
Mansut ...	is of 24 tass	27.12 "
Hāveri ...		34.75 "
Haidarābād ...	Cloth measure	35.32 "
Japan ...	Fuc	72.08 "
Jalndā ...	Gas	33.6 "
Jambhur ...		27.12 "
Jangte-Mahāli ...	High, 80 = 80 hāth	1600 square yards nearly.
Hanera ...	Gas, of two hāth	30 inches nearly.
Tahā ...	Peck	27.6 inches.
Madrās ...	Mūd, 60 = 40 feet	2400 square feet.
	Kāri = 24 māl	4.3215 acres.
Malabar ...	Past	10.46 inches.
Malacca ...	Kovid	18.12 "
Māwa ...	Gas (from 25 to 32)	50.00 "
	High, of 20 wāsi	2 rods nearly.
Masnah ...	Peck	27.6 inches.
Masulipatam ...	Yard	38.25 "
Meerut ...	Local gas	30.60 "
Meerut ...	Kabul = 10 inches. Gas	25 "
Morābād ...	Gas, from 31.6 to 33.8	33.50 "
	Jarh = 20 gathas of 3 gas	197.4 feet.
	High = 15 = 15 = 224 square gathas	2204 square yards.
New Boudy ...	Gas	21.70 inches.
Noulgrud ...	Gas	33. "
Pelaukoti ...	Gajam, for cloth	30.48 "
Pandri ...	Gas	49.75 "
Phawari ...	is for carpets, etc. (Nāh) of 44 Bagas	33. "
Putra ...	is for broad cloth	42.5 "
	Jarh, 20 bunches of 3 gas	55 yards.
	High, 20 = kashā or handoom	2025 square yards.
Persia ...	Gas, royal	37.5 inches.
	Common measure	25.0 "
	Parmang, 20th of a degree of the square	
Rangoon ...	Tauing, or cubit	19.1 "
	Tauing, or 1000 alin	2 miles, 258½ yards.
Rangpur ...	Gas, for katta cloth	32 inches.
Seringapatam ...	Gajah	35.5 "
Siam ...	Yach (2000 = 1 league)	75.78 "
Sonamuk ...	Cash, used at the factory	52.4 "
Surat ...	Gas, builder's	27.5 "
Saikhābād ...	Gas, local, 31.3 to 32.7	32.0 "
Tellicherry ...	Gas	28.8 "
Tielot ...	Revenue leg, of 5½ hāth =	8 ft. 9 inches.
	High, 20 = 20 legs =	1600 square yards.
	Small leg, or red, 5½ hāth =	9 feet 4½ inches.
	High, 20 = 20 legs =	3900½ square yards.
	(In Champaran and Chupra, the leg or red is of 7 hāth).	
Travancor ...	Tuin, for timber	28.46 cubic inches.
	Mura, of stone-cutters	53.02 inches.
	Kuin, in agriculture	21.16 feet.
Ságar ...	Standard high introduced	(See Agra).

At most of the places omitted in the above table, such as Achen, Arrot, Beleri, Carwar, Ceylon, Cochín, Comoroddy, Jangipur, Bengal generally, Penang, Radnagar, Santipur, etc.; English measures alone are used, or at least a cubit founded on the English measure of 18 inches.

[The following notes are extracted from Elliot's 'Glossary,' already put under contribution (page 92):—

"The *Biswa*, from بیس 'twenty,' is the twentieth part of a 'Boogha;' and besides being a measure of land, it is also used to signify the extent of proprietary right in an estate. Each estate or village is considered an integer of one 'Boogha,' which is subdivided into imaginary *Biswas* and *Biswasas*, to show the right of any particular party. Thus, the holder of 5 *Biswas* is a holder to the extent of one-fourth of the entire village; precisely in the same way as the *da* was used amongst the Romans. Thus, *heres ex avunculis*, 'heir to one twenty-fourth'—*heres ex dodrantis*, 'heir to three-fourths'—*heres ex aar*, 'sole proprietor' (Cic. Att. iv. 16, vii. 8.—Cic. pro Cæcina, c. 6.—Plin. l. v. Ep. 3.) In the same manner *das*, *dasas*, was used to express a *biswa* *dasas*—*dasas ex biswa*—and thus in sound and meaning (of course there is no real connection) there is a close resemblance between the words. *Das*, when it was thus applied as a sub-division of the *da*, was the eighth part of a *Jugum* or *are*; but, as is usually supposed, two-thirds—*Partes dim tertie pules decem novem milia et ducentis hoc est das, in quo scripula carit.* (Colum. lib. v. cap. 2).

"*Coss*, کوس *kos*. The Itinerary measure of India, of which the previous value has been much disputed, chiefly on account of the difficulties which attend the determination of the exact length of the *Guz*, or yard. The 'Ayen-i-Akbari' lays down distinctly that the *Cos* consists of 100 *ards* (*ards*), each *ard* of 50 *Guz*; also of 400 *pals* (*pals*), each of 12½ *Guz*: either of which will give to the *Cos* the length of 5,000 *Guz*. The following particulars relative to the distances between the old *Minars*, or *Cos* pillars, may be interesting, and may be considered to afford the nearest means we have of ascertaining the true standard.

	Exact distance in English yards.	Exact distance in dallas.
Octagonal <i>Minar</i> to <i>Nurshah</i> in Delhi .....	4,642	4,489
<i>Minar</i> between <i>Nurshah</i> and <i>Shajewargah</i> .....	4,594	4,401
<i>Minar</i> opposite <i>Akbari</i> .....	4,522	4,379
<i>Minar</i> opposite <i>Nirupur</i> .....	4,579	4,373
Ruins of <i>Minar</i> opposite to <i>Shahjahan</i> .....	4,610	4,501
Average...	4,558	4,467

Length of the *Cos* = 2 miles, 4 furlongs, 155 yards.

It is important to observe that the length of the *Indian Guz* deduced from these measurements is 22 5/8 inches, showing how very nearly correct is the length of 33 inches assumed by the British Government. The measurements taken to the south of Delhi, between the *Minars* in the *Muttra* district, closely correspond. Out of twelve distances it is found that eight give 2 m. 4 f. 19 p. 1 y., three give 2 m. 4 f. 25 p. 3 y., and one gives 2 m. 4 f. 38 p. 2 y. It may be proper to remark that it is frequently supposed that the *Minars* are set up every two *Coss*, and that the *Cos* contained 2,500 yards; but the 'Ayen-i-Akbari' appears sufficiently explicit on this point. The same work gives the value of the local *Cos*. It says, 'the *Guzerat Cos* is the greatest distance at which the ordinary bellowing of a cow can be heard, which is determined to be 50 *Jurushs*, or 16,000 *Guz*.' This *Cos* resembles the Chinese *li*, i. e. the distance which can be attained by a man's voice exerted in a plain surface, and in calm weather. Another in Bengal is estimated by plucking a green leaf, and walking with it till it is dry. Another is measured by a hundred steps made by a woman carrying a jar of water on her head, and a child in her arms. All these are very indefinite standards. The same may be remarked of the oriental *Mael*, as well as the European mile, and league. The two former evidently derive their name from the Roman *Milliarum*, and the difference of their value in different places proves that the mere name was borrowed, without any reference to its etymological signification. According to the 'Kamus,' the oriental *Mael* is a lax and vague measure, but it has been considered by Dr. Lee to be to the English one, as 139 to 112. The league also, from the *Gyrcum* *gyrus*, 'to turn,' (signifying the distance that can be readily seen by the eye on a plain surface) is as indefinite as a *Guzerat*, or *Gao*, and a Bengal, or *Dhappen*, *Cos*, and sufficiently accounts for its varying

standard in Europe. *Coss* is an Indian word; the equivalent word in Persian is *Kurob*, the same as the Sanscrit *Krosa*, of which four go to the *Yojan*; about the precise value of which different opinions are held. Bopp ('*Nalus*,' p. 413) says it is equal to eight English miles. Professor Wilson ('*Sanscrit Dictionary*,' p. 689) estimates it at nine miles, and says other computations make it about five miles, or even no more than four miles and a half, and, in his commentary on the Chinese travels, estimates it at no higher than four. But these travels enable us to fix the distance with tolerable precision. By following Fa-Hien's route between places of which the identity is beyond question, as between *Mutra* and *Canoujo*, and between *Patala* and *Benares*, we find the *Yojan* in his time to be as nearly as possible seven English miles; and this agrees much better with what we find the *Yojan* to be, if we resolve it into its component parts. Eight barley-corns equal a finger, twenty-four fingers equal a *Dand*, one thousand *Dands* equal one *Krosa*, and four *Krosa*, one *Yojan*. Now, estimating the finger's breadth at eight barley-corns, this makes the *Yojan* equal to six miles, one hundred and six yards, and two feet. It is the generally received opinion that from *Coss* is derived the word '*cours*,' used by the European residents of India to represent a *promenade*, but the '*Coss*' of Southern Europe gives a much more probable origin.

"*Jureeb* جرīb *जरीब* *jarib*. A measuring chain, or rope. Before Akher's time it was a rope. He directed it should be made of bamboo with iron joints, as the rope was subject to the influence of the weather. In our survey measurements we use a chain. A *Jureeb* contains 60 *Gaz*, or 20 *Gut*, has, and, in the standard measurement of the Upper Provinces, is equal to five chains of 11 yards, each chain being equal to 4 *Gut*, has. A square of one *Jureeb* is a *Beeg*, ha. Till the new system of survey was established, it was usual to measure lands paying revenue to Government with only 18 knots of the *Jureeb*, which was effected by hanging two knots over the shoulder of the measurer to his waist. Rent-free land was measured with the entire *Jureeb* of 20 knots. A *Jureeb*, in Hebrew and Arabic, signified originally only a measure of capacity, equal to 4 *Qafes*, or 384 *Mud*<sup>1</sup> (Latin, *modius*), and in course of time came to signify the portion of land which required as much to sow it as a *Jureeb* would contain. — (*Asiatic Researches*). The *Petche* and *Nalee* of Gurkhal and Kumaon have a similar origin.

"*Dhucha* *धुचा* *Ducha*. Four and a half. The word is found in *Arithmetical Tables* of the *Multiplication of Fractions*, which are in constant use with our Surveying *Amsons*, when reducing their linear measurements to *Beeg*, ha. The words used by them in Fractional Multiplication are

<i>Ducha</i> , <i>डुचा</i> 1)	<i>Poocha</i> , <i>पूचा</i> 5)
<i>Dhuma</i> , <i>धुमा</i> 2)	<i>Khucha</i> , <i>खुचा</i> 6)
<i>Honta</i> , <i>होता</i> 3)	<i>Sutucha</i> , <i>सुतुचा</i> 7)
<i>Dhucha</i> , <i>धुचा</i> 4)	

The size of the fields rarely requires *Amsons* to go beyond this"]

<sup>1</sup> [These words are both retained in the Spanish *caga* and *plena*. Indeed, nearly all the Spanish weights and measures are, like very many administrative words, derived from the Arabic:—As the *quintal* of one hundred pounds, from *kantar*; of which the fourth (*risla*) is the *arreal*; *arreal*, from *arreal*; *rama*, a span, from *shama*; and so on.—'Al Makkari,' i., p. 500.]

## INDIAN CHRONOLOGICAL TABLES.

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The object of the present division of our work is to furnish—first, convenient Tables for the Reduction or Comparison of the various Eras in use throughout India; secondly, Tables of Ancient and Modern Dynasties, extracted from such sources as are available for India and the neighbouring countries. There are so many excellent works on these subjects as to leave us nothing more than the task of compilation or rather selection. For information regarding the astronomical and chronological computations of the Hindûs, Colebrooke, Bentley, and Warren are the principal authorities. The '*Kāla-Saṅkalita*' of the latter author contains the fullest particulars of all the Eras in use. It is from this work that the present tables have been principally taken, with such abridgment as was necessary to bring them within the compass of an octavo volume. Col. Warren's tables of the Hijra being in a less convenient form, we had remodelled them before it came to our knowledge that a complete series for every month of the Muhammadan era, down to A.D. 1900, had been published in Calcutta, forty-four years ago, in 1790. These tables have, however, been long out of print. Playfair's *Chronology*, in folio, contains also a supplemental table of the Hijra calendar, copied from the celebrated French work, '*L'Art de vérifier les Dates*.' There are occasional differences of a day in all tables of the Hijra.

A compendious account of some of the Indian eras was printed as a part of the '*Companion to the Almanac*' published by the Society for the Diffusion of Useful Knowledge, for the year 1830. The whole article, however, on the eras of ancient and modern times, is calculated to be of such great utility in this country, both to Europeans who are out of the reach of works of reference or chronology, and to native

students of European literature and history, who have no prior acquaintance with the subject, that we make no apology for reprinting the paper entire, as an introduction to the tables which follow.

THE ERAS OF ANCIENT AND MODERN TIMES, AND OF VARIOUS COUNTRIES, EXPLAINED; WITH A VIEW TO THE COMPARISON OF THEIR RESPECTIVE DATES.

In the earliest stages of society, some division of time must have been necessary, and some means devised by man in the most savage state, to communicate to each other the period of undertaking, in concert, a hunt or a predatory excursion. But in such a condition the views of man do not extend far, and very limited periods would therefore suffice. The division of day and night, and the scarcely less obvious distinction of new and full moon, might have served to mark the lapse of time for ages; and, although in all climates the alternations of summer and winter, and of wet and dry periods, must have obtruded themselves on the feelings of the most unsophisticated, it was probably not until the practice of agriculture had afforded men leisure for reflection, that any accurate observations were made on the duration of the seasons, or means used to ascertain the periods of their return. We see, at the present time, that many societies of men, who live only by hunting and fishing, have no exact knowledge of duration of time beyond that of a moon or season, and designate a term of five or of fifty years, equally as a long time. All agricultural nations are aware of the return of the same seasons after a lapse of twelve or thirteen moons; but many years must have elapsed before the length of a solar year was accurately determined. Less civilized nations still continue to compute their time in part by the motions of the moon; and this was the mode of the Greeks, and of the Romans until the correction of Julius Cæsar, but the subject was so little understood even in his time, that an error of several days crept into the Roman calendar soon afterwards, requiring another reformation.

It will render the comparison of eras much easier, if we give some account of what is meant by a solar and a lunar year. A solar year is that space of time during which all the seasons have their course. This takes place in 365 days, 5 hours, 48 minutes, and 49 seconds; and an approximation to that time has been adopted by those nations which have had sufficient astronomical science to determine it. But as it would be impracticable to begin every new year at a different hour of the day, which would be necessary if the perfect year should always be completed before the commencement of a new one, 365 days have been taken as the length of a year, leaving the odd hours and minutes to accumulate until they amount to a whole day, when they are added to the year, making what is called a leap year, or intercalary year, of 366 days. The various ways of doing this will be detailed when we speak of the different eras. Some nations still use a year of 365 days without any intercalation; and this is called a *regnæ*, or *eræ* year, because its commencement varies through all the different seasons.

A lunar year consists of 12 moons, or 354 days. This may be convenient enough for short periods, but is so ill adapted for the computation of a civilized nation, that none but Mahometans have continued in the use of it even for a little time. It suits the course of time so ill, that its commencement varies, in a few years, through all the seasons; and many men, amongst the nations which use it, can remember the fests and festivals altering from summer to winter, and again from winter to summer, and their seed-time and harvest alternately wandering from the beginning of the year to the end.



The luni-solar year is that in which the months are regulated according to the course of the moon, but to which from time to time a month is added, whenever the year would range too widely from its original situation. This year is inconvenient from its varying duration; but as, in a long course of years, the months remain nearly at the same situation, it is less objectionable than the pure lunar year. It was the mode of computation of the Greeks and Romans, and is even now that of the Chinese, Tartars, Japanese, and Jews.

All these varying modes render the comparison of dates much more difficult than it appears to be at the first view. We shall endeavour as far as possible to simplify the calculation as to enable any arithmetician to compute, within a day or two, the ages of every nation, and to reduce them to the Christian era.

#### THE ROMAN YEAR.

The Roman year, in its arrangement and division, is that on which our year is entirely founded. The Romans reckoned their time from the date which some of their antiquaries chose to assign for the founding of Rome, viz., the 21st of April, in the 2nd year of the 6th Olympiad, or 754 a.c. This era is designated by the letters A.U.C., or *ab urbe condita*, "from the building of the city." The first year used by them, and attributed to Romulus, consisted of ten months, from March to December, or 304 days. A year exhibiting such a discrepancy from the real course of the seasons could not have remained long in use, and it is supposed that extraordinary months were added as often as it was found necessary. A correction is attributed to his successor Numa, who is said to have added two months to the year, January at the beginning, and February at the end. All these months consisted of 29 or 31 days. The year was lunar, and consequently shorter than the true year; several additions were therefore made, which brought the beginning of the year nearly to the same season, viz., the middle of winter. February subsequently became the second month, which change is alluded to by Ovid.

This computation was followed, with some variation, arising partly from ignorance, and partly from the intrigues of the priests, who had the direction of the calendar, until the time of Julius Cæsar, who, observing that the beginning of the year, instead of occurring in winter, as at first, had now receded to the autumn, ordered that the year A.U.C. 707, or 47 a.c., should consist of 445 days, whereby the following year might begin at the proper time. In order to avoid, in future, the confusion naturally attendant on years of such varied length as those hitherto in use, he determined that the year should be solar, without any reference to the lunar motions. Supposing the natural year to consist of 365 days and 6 hours, he ordered that three years in succession should each consist of 365 days, and the fourth should contain 366 days. He also allotted the respective number of days to each month, precisely as we use to this day. With the exception of July and August, (then called Quintilis and Sextilis, but altered to their present names in honour of Julius and Augustus Cæsar), the names also of the Roman months were similar to ours. The only difference between their calendar and ours was in their mode of counting days, which was backwards instead of forwards. To spare a long explanation, which perhaps might not be sufficiently intelligible to all readers, we shall set down a Roman month, with the days, according to our mode, opposite to each Roman day.

English.	Roman.	English.	Roman.
Jan. 1	Calends.	Jan. 6	8th before Ides.
2	4th before nones.	7	7th ditto.
3	3d before nones.	8	6th ditto.
4	day before nones.	9	5th ditto.
5	Nones.	10	4th ditto.

<i>English.</i>	<i>Roman.</i>	<i>English.</i>	<i>Roman.</i>
Jan. 11	3d before <i>Ides</i> .	Jan. 22	11th bef. Cal. of Feb.
12	day ditto.	23	10th ditto.
13	<i>Ides</i> .	24	9th ditto.
14	19th before Cal. of Feb.	25	8th ditto.
15	18th ditto.	26	7th ditto.
16	17th ditto.	27	6th ditto.
17	16th ditto.	28	5th ditto.
18	15th ditto.	29	4th ditto.
19	14th ditto.	30	3d ditto.
20	13th ditto.	31	day before Cal. Feb.
21	12th ditto.		

The *nones* and *ides* of March, May, July, and October, are two days later than in January, the *nones* falling on the 7th, and the *ides* on the 15th of these months; the 2nd of March will be therefore the 6th before the *nones*, and so on. In all the other months, the *calends*, *nones*, and *ides* hold the same places as in the month of January. In the months which have but 30 days, the number of days before the *calends* will, of course, be one less, and in February, three less. In leap years, the additional day was inserted in February, as in our calendar; but instead of making a 29th day, the 24th was reckoned twice, and being called in Latin *sexto Cal. Mart.*, (or sixth day before the *calends* of March,) this, with the addition of his (twice), gave the name of *hiasterile* to the leap year, which it still retains. The first year reckoned on this principle was a leap year. (A.U.C. 708, or 46 a.c.)

Julius Cæsar was killed soon after the reformation of the calendar, and his plan was so little understood, that, instead of making the fourth year a *hiasterile*, a leap year was reckoned every third year, as though the length of the true year had been 365 days 8 hours. This error was discovered 37 years after, at which time thirteen intercalations had taken place instead of ten, and the year began three days too late. The calendar was accordingly again corrected, not by throwing out the three superfluous days at once, but by an order that the twelve following years should be all of 365 days each, and that there should be no leap year until A.U.C. 760, or a.d. 7. From that time the account has been kept without error, and the Roman year has been adopted by almost all Christian nations, with no other variation than taking the birth of Christ as the commencement, instead of the building of Rome.

If the given Roman year be less than 754, deduct it from 754; if the given Roman year be not less than 754, deduct 753 from it; the remainder gives the year (a.c. and a.d., in the first and second cases respectively) in which the Roman year commences.

Ex.—Required the year	780 A.U.C.	Required the year	761 A.U.C.
deduct	753		754
	27 A.D.		761
			53 A.D.

#### THE OLYMPIAD.

The Greeks computed their time by the celebrated era of the Olympiads, which date from the year 776 a.c., being the year in which Coroebus was successful at the Olympic games. This era differed from all others in being reckoned by periods of four years instead of single years. Each period of four years was called an Olympiad, and in marking a date, the year and Olympiad were both mentioned. The year was luni-solar, of 12 or 13 months. The names of the months varied in the different states of Greece, but the Attic months are most usual. They are as follows:—

Hectionbeon,	Gamelion,
Metageitaiou,	Anthesterion,
Boedromion,	Elaphebolion,
Pyanepsion,	Munychion,
Mormacterion,	Thargelion,
Poseideon,	Sciropheorion.

In the year of 13 months, the additional month was inserted after Poseideon, and called the second Poseideon.

The months consisted of 30 and 29 days alternately, and the short year in consequence contained 354 days, while the intercalary year had 384. The third year of the first Olympiad consisted of 12 months, and the first and fourth years of the second Olympiad were also intercalary; consequently in the first Olympiad there were 1,446 days, and in the second 1,476, making together 2,922, exactly equal to eight Julian years: this mode of interpolation would therefore precisely bring about the commencement of the ninth year to the same season, as that of the first year. But as the Olympic months followed the course of the moon, and 99 such months contained 2,923½ days, the moon was in consequence a day and a half in advance of the reckoning. The error was, however, allowed to accumulate until it reached three days, which was in four Olympiads, or sixteen years, to the last of which three days were added. This corrected the error with respect to the moon, but it threw out the commencement of the year, as regarded the seasons, making it three days too late. No means were adopted to remedy this until the fortieth Olympiad, the last year of which was made to consist of 12 months only, instead of 13 as usual, and the forty-first Olympiad began with the same days of the moon and sun as the first had done 160 years before. By this reckoning, the year always began between the new and full moon before or after the summer solstice, though more commonly after; and it continued in use until 432 B.C. or fourth year of the eighty-sixth Olympiad, when the cycle of 19 years was invented by Meton. This astronomer found that the Attic months no longer followed the course of the moon, but that the new moon nearest the summer solstice, which should have been the first day of the 87th Olympiad, would actually take place on the 13th day of Sciropheorion, in the 4th year of the 86th Olympiad. He therefore proposed to commence the 87th Olympiad from that day, and to adopt a new system of interpolation. He supposed 235 moons to be exactly equal to 19 solar years, and that in every period of 19 years, the new and full moons would recur regularly at the same seasons. Nineteen years of 12 moons each would contain 228 moons, and consequently 7 moons were to be added. These were inserted in the 3d, 5th, 8th, 11th, 13th, 16th, and 19 years. Instead also of making the months of 30 and 29 days alternately, he determined that each month should consist nominally of 30 days, but that every 6th day should be omitted in numbering. The third day of Boedromion, for example, was omitted in the first year, the 6th of Poseideon, and so on to the end of the nineteenth year, when the last exemptible day (the 3d of Thargelion) was retained, making that year to consist of 385 days. This cycle was in use above a century, but was not quite accurate; 19 solar years are equal to about 6,939 days, 14 hours and a half, and 235 lunations to 6,939 days, 16 hours and a half, or 2 hours more. In the year 330 B.C. this excess amounted to only 11 hours; but by the cycle of Meton, to above 52 hours, he having made 19 years equal to 6,940 days; when another astronomer, Calippus, having made several observations on the solstice, calculated that the excess made 1 day in 76 years. He, therefore, invented the cycle of 76 years, called from him the Calippian, which consisted of 27,759 days, exactly equal to 76 Julian years, but above 14 hours in excess of the true solar year. In this period were included 940 lunations, equal to 27,758½ days.

The system of Calippus began in the 8th year of the Metonic cycle (330 a.c.), and is frequently referred to as a date by Ptolemy. It is supposed that he altered the periods of inserting the intercalary months, but this is doubtful. The system of Calippus continued in use as long as the Olympiads were employed, and was exactly equal to the Julian, on an average of years.

To reduce the date by Olympiads to our era, multiply the past Olympiad by four, and add the odd years. Subtract the sum from 777 if before Christ, and subtract 776 from the sum if after Christ, the remainder will be the beginning of the given year; to decide on the exact day would be very difficult, on account of the alterations which the system has undergone. It will be, perhaps, sufficient to observe that the year begins within a fortnight of the middle of July.

#### THE CHRISTIAN ERA.

The Christian era, used by almost all Christian nations, dates from January 1st, in the middle of the fourth year of the 184th Olympiad, in the 753rd of the building of Rome, and 4714th of the Julian period. It was first introduced in the sixth century, but was not very generally employed for some centuries after.

The Christian year in its division follows exactly the Roman year, consisting of 365 days for three successive years, and of 366 in the fourth year, which is termed leap year. This computation subsisted for 1,000 years throughout Europe without alteration, and is still used by the followers of the Greek Church; other Christians have adopted a slight alteration, which will be shortly explained. The simplicity of this form has brought it into very general use, and it is customary for astronomers and chronologists, in treating of ancient times, to date back in the same order from its commencement. There is, unfortunately, a little ambiguity on this head, some persons reckoning the year immediately before the birth of Christ, as 1 a.c., and others noting it with 0, and the second year before Christ with 1, making always one less than those who use the former notation. The first is the most usual mode, and will be employed in all our computations.

The Christian year (or Julian year), arranged as we have shewn, was 11' 11" too long, amounting to a day in nearly 129 years; and towards the end of the sixteenth century, the time of celebrating the church festivals had advanced ten days beyond the periods fixed by the council of Nice in 325. It was in consequence ordered, by a Bull of Gregory XIII., that the year 1682 should consist of 365 days only, which was effected by omitting ten days in the month of October, viz., from the 5th to the 14th. And, to prevent the recurrence of a like irregularity, it was also ordered, that in three centuries out of four, the last year should be a common year, instead of a leap year, so it would have been by the Julian calendar. The year 1600 remained a leap year, but 1700, 1800, and 1900 were to be common years. This amended mode of computing was called the New Style, and was immediately adopted in all Catholic countries, while the Old Style continued to be employed by other Christians. Gradually the New Style was employed by Protestants also. The last ten days of 1699 were omitted by the Protestants of Germany, who, in consequence, began the year 1700 with the New Style; and in England the reformed calendar was adopted in the year 1752, by omitting eleven days, to which the difference between the styles then amounted. The alteration was effected in the month of September, the day which would have been the third being called the fourteenth. The Greeks and Russians still use the Old Style.

To turn the Old Style to the New.—

From the alteration of style to the 29th February, 1700, add 10 days.

From 1st March, 1700, to 29th February.....	1800, add 11 days.
" " 1800, " " .....	1900, " 12 days.
" " 1900, " " .....	2100, " 13 days.
Examples:—17th March, 1801, O.S. is 29th March, 1801, N.S.	
19th Feb., 1703, O.S. is	2nd March, 1703, N.S.
24th Dec., 1690, O.S. is	3rd Jan., 1691, N.S.
20th Dec., 1823, O.S. is	1st Jan., 1820, N.S.

There will sometimes be a difference of one year in a date, from the circumstance that, in many countries, the time of beginning the year has varied. In England, until the year 1752, the year was considered to begin on the 25th of March; any date, therefore, from the 1st of January to the 24th of March, will be a year too little. It had been the practice for many years preceding the change of style to write both years, by way of christening mistakes, as 1st of February, 170 $\frac{1}{2}$  or 1707-8, meaning the year 1706 if begun in Jan., or 1707 if begun in March.

In some countries, Easter-day was the first day of the year, in others the 1st of March, and in others, again, Christmas-day; but no certain rule can be given, as even in the same nation different provinces followed a different custom. The day of the week is, however, frequently added in old dates, which will at once clear up the ambiguity, the day of the week answering to any given date.

All nations, at present using either the Old or New Style begin the year on the 1st of January.

The Creation has been adopted as an epoch by Christian and Jewish writers, and would have been found very convenient, by doing away with the difficulty and ambiguity of counting before and after any particular date, as is necessary when the era begins at a later period. But, unfortunately, writers are not agreed as to the precise time of commencing. We consider the Creation as taking place 4004 years a.n.; but there are about a hundred and forty different variations in this respect. The following are those that have been most generally used:—

#### THE ERA OF CONSTANTINOPLE.

In this era the Creation is placed 5508 years a.n. It was used by the Russians until the time of Peter the Great, and is still used in the Greek Church. The civil year begins the first of September, and the ecclesiastical towards the end of March; the day is not exactly determined.

To reduce it to our era, subtract 5508 years from January to August and 5509 from September to the end.

#### ERA OF ANTIOCH, AND ERA OF ALEXANDRIA.

We place these together, because, although they differed at their formation by 19 years, they afterwards coincided. They were both much in use by the early Christian writers attached to the churches of Antioch and Alexandria. In the computation of Alexandria, the Creation was considered to be 5502 years before Christ, and, in consequence, the year 1 a.n. was equal to 5503. This computation continued to the year 284 a.n., which was called 5785. In the next year (285 a.n.), which should have been 5787, ten years were discarded, and the date became 5777. This is still used by the Abyssinians.

The era of Antioch considered the Creation to be 5492 years before Christ; and therefore the year 285 a.n. was 5777. As this was equal to the date of Alexandria, the two eras, from this time, were considered as one.

Dates of the Alexandrian era are reduced to the Christian era by subtracting 5502 until the year 5786, and after that time by subtracting 5492.

In the era of Antioch 5492 are always subtracted.

#### THE ABYSSINIAN ERA.

The Abyssinians reckon their years from the Creation, which they place in the 5,493rd year before our era,<sup>1</sup> on the 29th of August, Old Style; and their dates will consequently exceed ours by 5492 years and 125 days. They have 12 months of 30 days each, and 5 days added at the end, called *Pagomen*, from the Greek word *παιγεμεν*, added. Another day is added at the end of every fourth year. To know which year is leap year, divide the date by 4, and if 3 remains, the year will be leap year. It always precedes the Julian leap year by one year and four months. The following are names of the months, with their beginnings referred to the Old Style:—

Mascaram .....	29th August.	Miyazis .....	27th March.
Tekemt .....	28th September.	Gonbet .....	26th April.
Heidar .....	28th October.	Sene .....	26th May.
Tahase .....	27th November.	Hams .....	25th June.
Ter .....	27th December.	Nahase .....	25th July.
Yasatit .....	26th January.	Pagomen .....	24th August.
Magabit .....	25th February.		

To reduce Abyssinian time to the Julian year, subtract 5492 years and 125 days.

The Abyssinians also use the era of Mariya, or Dioclesian, with the same months as in the above.

#### THE JEWISH ERA.

The Jews usually employed the era of the Seleucides until the fifteenth century, when a new mode of computing was adopted by them. Some insist strongly on the antiquity of their present era; but it is generally believed not to be more ancient than the century above named.

They date from the Creation, which they consider to have been 3760 years and 3 months before the commencement of our era. Their year is luni-solar, consisting either of 12 or 13 months each, and each month of 29 or 30 days. The civil year commences with or immediately after the new moon following the equinox of autumn.

The months, with the number of days in each, are as follows:—

1	Tisri .....	30 days	(Veadar) .....	29 days	
2	Marchevan .....	29 or 30	7	Nisan, or Abib .....	30
	Chesvan or Bal .....		8	Iyar, or Ziv .....	29
3	Chisleu .....	29 or 30	9	Sivan .....	30
4	Thabet .....	29	10	Thammuz .....	29
5	Sebat .....	30	11	Ab .....	30
6	Adar .....	29	12	Elul .....	29

And in intercalary years, 30.

The month Veadar is omitted in years of 12 months.

The average length of the year of 12 months is 354 days; but, by varying the length of Marchevan and Chisleu, it may consist of 353 or 355 days also. In the same manner, the year of 13 months may contain 382, 384, or 385 days. In 19 years, 12 years have 12 months each, and 7 years 13 months. The following table of 19 years will show the number of months in each year, as well as the first day of their year, reduced to the New Style: the first day will not always be quite accurate,

<sup>1</sup> The Abyssinians place the birth of Christ in the 5,500th year of the Creation, and consequently eight years after our era.

as certain lucky and unlucky days require the postponement of a day in some years. The year must be divided by 19, and the remainder will show the year of the cycle. If there be no remainder, it is the nineteenth year.

YEAR OF THE CYCLE.		MONTHS.	
The 1st	begins about the 2nd of October, and consists of	12	
2nd	22nd of September	12	
3rd	10th	13	
4th	29th	12	
5th	18th	12	
6th	8th	13	
7th	27th	12	
8th	16th	13	
9th	6th of October	12	
10th	26th of September	12	
11th	14th	13	
12th	2nd of October	12	
13th	21st of September	12	
14th	10th	13	
15th	29th	12	
16th	18th	12	
17th	7th	13	
18th	26th	12	
19th	14th	13	

To reduce the Jewish time to ours, subtract 3761, and the remainder will show the year: the beginning of the year may be ascertained by the above table, and the months must be counted from that time.

Example:—Required the 1st of Chislev 5588.

5588	19)1088(294
3761	56
1827	178
	171
	78
	70
	8

The remainder shows the year 5588 to be the second of the cycle, and consequently to begin on the 22nd of September. The 1st of Chislev will therefore be about the 20th of November, 1827.

The ecclesiastical year begins six months earlier, with the month of Nisan. Consequently, when the given year is ecclesiastical, deduct a year in the date from Nisan to Elul, inclusive.

The Jews frequently in their dates leave out the thousands, which they indicate by placing the letters פקד meaning פקדונות "according to the lesser computation."

(It will be unnecessary to mention the various other epochs that have taken place from the Creation, as those detailed are the only ones that have been in general use.)

#### THE ERA OF NABONASSAR

received its name from that of a prince of Babylon, under whose reign astronomical studies were much advanced in Chaldaea. The years are vague, containing 365 days each, without intercalation. The first day of the era was Wednesday,<sup>1</sup> 20th February, 747 B.C.

<sup>1</sup> This is said, by mistake, to be Thursday, in 'L'Art de vérifier les Dates.'



To find the day of any Julian year on which the year of Nabonassar begins, subtract the given year, if before Christ, from 748, and, if after Christ, add it to 747. Divide the result by 4, omitting fractions, and subtract the quotient from 57 (*i.e.* the number of days, from January 1 to February 26). If the quotient exceed 57, add 365 as often as necessary, before subtraction. The remainder will be the day of the year given. The first result before the division by 4, increased by a unit for each 365 added to 57, will be the year of Nabonassar then beginning.

The day of the week on which the year of Nabonassar begins may be known by dividing by 7. If there be no remainder, the day will be Tuesday; if there be a remainder, the day placed below it in the following table will be the day required.

0	1	2	3	4	5	6
Tu.	W.	Th.	F.	Sa.	Sa.	M.

As the above stated rule may be one day in error from the omission of fractions, it may be corrected by the help of this little table.

The year of Nabonassar being given, to find when it begins.

Rule.—Divide the year by 4: subtract the quotient from 57, adding 365, if necessary, as before; the remainder will be the number of days from the 1st of January.

The given year diminished as often as 365 has been added, will show the number of Julian years from 747 *a.c.* If it be less than 748, subtract from that number, and the remainder will be the year before Christ; if equal, or more, subtract 747 from it, and the remainder will be the year after Christ.

#### THE EGYPTIAN ERA.

The old Egyptian year was identical with the era of Nabonassar, beginning on the 26th February, 747 *a.c.*, and consisting of 365 days only. It was reformed thirty years before Christ, at which period the commencement of the year had arrived, by continually receding, to the 29th August, which was determined to be in future the first day of the year. Their years and months coincide exactly with those of the era of Diocletian.

It appears from a calculation, that in 50 *a.c.*, the year must have begun on the 31st of August: in which case we must suppose the reformation to have taken place eight years earlier: however that may be, it is certain that the 29th of August was the day adopted, and the number of the year one more than would have resulted from taking 747 as the commencement of the era.

To reduce to the Christian era, subtract 746 years 125 days.

The old Egyptian year was in use for above a century after Christ; the reformed year being at first used only by the Alexandrians.

#### THE JULIAN PERIOD.

is a term of years produced by the multiplication of the lunar cycle 19, solar cycle 28, and Roman Indiction 15. It consists of 7980 years, and began 4713 years before our era. It has been employed in computing time, to avoid the puzzling ambiguity attendant on reckoning any period antecedent to our era, an advantage which it has in common with the numismatic eras used at different times.

By subtracting 4713 from the Julian period, our year is found. If before Christ, subtract the Julian period from 4713.

#### THE ERA OF DIOCLETIAN, CALLED ALSO THE ERA OF MARTYRS.

was much used by Christian writers until the introduction of the Christian era in the

sixth century, and is still employed by the Abyssinians and Copts. It dates from the day<sup>1</sup> when Dioclesian was proclaimed Emperor, at Chalcedon, 29th August, 284. It is called the Era of Martyrs, from the persecution of the Christians in the reign of Dioclesian. The year consists of 365 days, with an additional day every fourth year. Divide the date by 4, and if 3 remain the year is bissextile. It contains 12 months of 30 days each, with five additional in common years, and six in leap years.

The Coptic months are as follow, with the corresponding time according to the Julian Calendar.

COPTIC.	ARABIC.	COPTIC.	ARABIC.
Thoth .....	Tut .....	Phamenoth .....	Burmat .....
Phaophi .....	Habe .....	Pharmouti .....	Barmude .....
Atbye .....	Hafur .....	Pushone .....	Bashana .....
Cohier .....	Kyak .....	Payul .....	Bagne .....
Tybi .....	Taba .....	Eypho .....	Atsh .....
Mesir .....	Mashir .....	Masori .....	Mashri .....
	Ansahir .....		

The additional days are called, by the modern Copts, Nisi in common years, and Kebes in leap years; by the ancient Copts, Biabotakuji, and in Arabic Biabotanquji. The Abyssinian names are given under the head of Abyssinia.

To reduce the years of this era to those of the Christian, add 283 years 240 days.

When the Dioclesian year is the year after leap year, it begins one day later than usual, and in consequence one day must be added to the Christian year, from the 29th August to the end of the following February.

#### THE SYRIAN ERA, OR ERA OF THE SELEUCIDES.

dates from the reign of Seleucus Nicator, 311 years and 4 months before Christ. It was used in Syria for many years, and frequently by the Jews until the 15th century, and by some Arabians to this day. The Syrian Greeks began their year about the commencement of September; other Syrians in October, and the Jews about the Autumnal Equinox. We shall not pretend to great accuracy in this era, the opinions of authors being very various as to its commencement.

It is used in the book of the Maccabees, and appears to have begun with Nisan.

Their year was solar, and consisted of 365 days, with the addition of a day every fourth year.

To reduce it to our era, supposing it to begin 1st September, 312 B.C., subtract 311 years and four months.

The following are the months used by the Greeks and Syrians, with the corresponding Roman months.

SYRIAN.	MACEDONIAN.	ROMAN.
Elul .....	Gorpheus .....	September.
Tishrie I. ....	Hyperboreus .....	October.
Tishrie II. ....	Dina .....	November.
Chislev I. ....	Apellens .....	December.
Chislev II. ....	Andynens .....	January.
Shubat .....	Perileus .....	February.
Adar .....	Dystreus .....	March.
Nisan .....	Xantens .....	April.
Ayar .....	Artamides .....	May.
Hasiran .....	Darmus .....	June.
Tamus .....	Panemus .....	July.
Ab .....	Lous .....	August.

<sup>1</sup> Dioclesian was not in reality proclaimed until some months after this time.

## THE DEATH OF ALEXANDER THE GREAT

dates from the 12th of November, 324 *a.c.*,<sup>1</sup> on which day the 425th year of Nabonassar began. This era was computed by years of 365 days, with a leap year of 366 every four years, like the Julian year. The months were of 30 days each, with 6 additional. To compute it, deduct 323 from the given year, and the remainder will be the year of the Christian era. If before Christ deduct the year from 324.

## THE ERA OF TYRE

began the 19th of October, 125 *a.c.*, with the month Hyperborea. The months were the same as those used in the Grecian era. The year is similar to the Julian.

To reduce it to our era, subtract 124; and if the given year be less than 125, deduct it from 125, and the remainder will be the year before Christ.

## THE CASSAREAN ERA OF ANTIOCH

was used, in Syria, by Greeks and Syrians. The months are the same as those given under the Grecian era. The Greeks began with Ooripaeus, in the year 49 *a.c.*, and the Syrians with Tishrin I. of 45 *a.c.*

## THE ERA OF ARCAHAN

is used by Eusebius, and begins the 1st of October, 2010 *a.c.* To reduce this to the Christian era, subtract 2010 years 2 months, and the remainder will be the year and month.

## THE SPANISH ERA, OR ERA OF THE URRANS.

is reckoned from 1st of January, 35 years *a.c.*, being the year following the conquest of Spain by Augustus; it was much used in Africa, Spain, and the South of France. By a Synod held in 1180, its use was abolished in all the churches dependant on Barcelona. Pedro IV. of Arragon abolished the use of it in his dominions in 1350. John I. of Castile did the same in 1382. It continued to be used in Portugal until 1455.

The months and days of this era are identical with those of the Julian Calendar; and, consequently, to turn this time into that of our era, we have only to subtract 35 from the year. Thus the Spanish year 750 is equal to the Julian 715. If the year be before the Christian era, subtract it from 32.

## THE ERA OF YUSSEF III. OR THE PERSIAN ERA.

was formerly universally adopted in Persia, and is still used by the Parsees in India, and by the Arabs, in certain computations. This era began on the 16th of June, *a.d.* 632. The year consisted of 365 days only, and therefore its commencement, like that of the old Egyptian and Armenian year, anticipated the Julian year by one day in every four years. This difference amounted to nearly 112 days in the year 1075, when it was reformed by Jalaleddin, who ordered that in future the Persian year should receive an additional day whenever it should appear necessary to postpone the commencement of the following year, that it might occur on the day of the sun's passing the same degree of the ecliptic. This took place generally once in four years; but,

<sup>1</sup> This would be more accurately 223 *a.c.*, but the above date is more usually adopted.

after seven or eight intercalations, it was postponed for a year. It will be observed that such an arrangement must be perfect, and that this calendar could never require reformation; but it has the inconvenience of making it very difficult to determine beforehand the length of any given year, as well as that of causing a difference occasionally in the computation of persons living under different meridians; those living towards the east sometimes beginning their year a day after others more westerly situate; the sun rising in the old sign to those in the former situation, who consequently continued in the old year another day; while the others, having their sun rise in the new sign, began a new year. The present practice of the Parsees in India varies in different provinces, some beginning the year in September, and others in October. The months are as follows: they have each thirty days, and the intercalation of five or six days occurs at the end of Aban.

Verwardin,	Merhad,	Adar,
Ardebehsht,	Shewahr,	Dei,
Khordad,	Meher,	Behman,
Tir,	Aban,	Ispandarmen.

To reduce this era to the Christian year, add 639 to the given year, and the sum will be the year of our era in which the year begins, according to the practice of the Parsees.

Every day of the Persian month has a different name:

#### THE ERA OF THE ARMENIANS.

The Armenians began their era on Tuesday, the 9th of July, a.d. 552. Their year consists of 365 days only, and therefore anticipates the Julian one day in every four years.

To know the day of the week on which the Armenian year begins, divide the year by 7; if there be no remainder, the year begins on a Monday; if there be a remainder, the day put under it in this table will be the first of the year.

0	1	2	3	4	5	6
M	Tu.	W.	Th.	F.	Sa.	Su.

To reduce the Armenian year to the Julian, divide the given date by 4, and subtract the quotient from 191, adding 365 to 191 if necessary; the remainder will be the days from the beginning of the Julian year, and the Armenian date (diminished by 1, if 365 has been added to 191) added to 551, will give the Christian year.

The Armenian ecclesiastical year begins on the 11th of August, and has an additional day at the end of every fourth year; and consequently coincides in division with the Julian year.

To reduce ecclesiastical Armenian years to our time, add 551 years and 222 days.

In leap years, subtract one day from March 1 to August 10.

NOTE.—The Armenians frequently use the old Julian style and months in their correspondence with Europeans.

#### THE FRENCH REVOLUTIONARY CALENDAR.

In the year 1792, the French nation, in their excessive desire to change all existing institutions, determined on the adoption of a new calendar, founded on philosophical principles. But as they were unable to produce any plan more accurate and convenient than that which was previously in use, they were contented to follow the old plan under a different name, merely changing some of the minor details and subdivisions, and commencing the year at a different time.

The first year of the era of the Republic began on the 22nd of September, 1792, *n.s.*, the day of the autumnal equinox. There were twelve months in each year of thirty days each, and five additional days at the end, celebrated as festivals. The fourth year was a leap year, called by the French an Olympic year. The months and additional festivals were as follow:—

Vendémiaire began 22 Sep.	Germinal began 21 March.
Brumaire..... 22 Oct.	Floréal..... 20 April.
Frimaire..... 21 Nov.	Prairial..... 20 May.
Nivôse..... 21 Dec.	Messidor..... 19 June.
Plovidse..... 20 Jan.	Thermidor..... 19 July.
Ventôse..... 19 Feb.	Fructidor..... 18 August.
Festival of Virtue, 17 Sep.	Festival of Opinion, 20 Sept.
" Genius, 18 "	" Rewards, 21 "
" Labour, 19 "	

In Olympic years, from the 11th Ventôse (which was on the 29th of February) to the end of the year, each day answered to one day earlier than in other years; thus Germinal began on the 20th of March.

The months were divided into decades of ten days each, instead of weeks. These were the names of their days.

Primidi,	Quinti,	Octidi,
Duodi,	Septi,	Novidi,
Tridi,	SeptiS,	Decidi,
Quarti,		

As this plan lasted so short a time, it will take less space to insert a table of years corresponding with the Christian era, than to give a rule for the deduction of one era from another.

1 1792-3	8 1799-1800
2 1793-4	9 1800-1801
3 1794-5	10 1801-2
4 1795-6	11 1802-3
5 1796-7	12 1803-4
6 1797-8	13 1804-5
7 1798-9	14 1805-6

#### THE MAHOMETAN ERA, OR ERA OF THE HEGIRA.

dates from the flight of Mahomet to Medina, which took place in the night of Thursday, the 12th July, *a.n.* 622. The era commences on the following day, viz. the 13th July. Many chronologists have computed this era from the 12th of July, but Cantemir has given examples, proving that, in most ancient times, the 13th was the first day of the era; and now there can be no question that such is the practice of Mahometans. The year is purely lunar, consisting of twelve months, each month commencing with the appearance of the new moon, without any intercalation to bring the commencement of the year to the same season. It is obvious that, by such an arrangement, every year will begin much earlier in the season than the preceding, being now in summer, and, in the course of sixteen years, in the winter. Such a mode of reckoning, so much at variance with the order of nature, could scarcely have been in use beyond the pastoral and semi-barbarous nation by whom it was adopted, without the powerful aid of fanaticism; and even that has not been able to prevent the use of other methods by learned men in their computations, and by governments in the collection of revenue. It will also be remarked that, as the Mahometans begin each month with the appearance of the new moon, a few cloudy days might retard the commencement of a month, making the preceding month longer than usual. This, in

fact, is the case, and two parts of the same country will sometimes differ a day in consequence; although the clear skies of those countries where Islamism prevails, rarely occasion much inconvenience on this head. But in chronology and history, as well as in all documents, they use months of thirty and twenty-nine days, alternately, making the year thus to consist of 354 days: eleven times in thirty years, one day is added to the last month, making 355 days in that year. Consequently, the average length of a year is taken at  $354\frac{11}{30}$  days, the twelfth of which is  $29\frac{22}{300}$ , differing from the true lunation very little more than three seconds, which will not amount to a day in less than 2250 years, a degree of exactness which could not have been attained without long continued observations.

The intercalary year of 355 days occurs on the second, fifth, seventh, tenth, thirteenth, sixteenth, eighteenth, twenty-first, twenty-fourth, twenty-sixth, and twenty-ninth years of every thirty years. Any year being given, to know whether it be intercalary or not, divide by thirty, and if either of the above numbers remain, the year will be one of 355 days.

The names of the months, as used by the Turks, with the length of each, are as follow:—

Moharem.....	30	Raghib.....	30
Saphar.....	29	Shaban.....	29
Rabi' I.....	30	Ramadan.....	30
Rabi' II.....	29	Shawwal.....	29
Jomadi I.....	30	Dhu'l kadh.....	30
Jomadi II.....	29	Dhu'l hajjah.....	29

And in intercalary 30 days.

They have weeks of seven days, named as follow:—

EUROPEAN.	PERSIAN.	ARABIC.	INDO-ARABIC.	MOD. ARABIC.
Su. Pasur gun.....	Yekshamb.....	Etwar.....	Bawal.....	Yom shad.
M. Pasur ertesi.....	Dushamb.....	Pas or Sonwar.....	Bahar.....	Yom Thana.
Tu. Sale.....	Shahamb.....	Mangul.....	Jehar.....	Yom tulla.
W. Charshamb.....	Charshamb.....	Roohi.....	Dakar.....	Yom arba.
Th. Panchamb.....	Panchamb.....	Jumrah.....	Pesuneh.....	Yom khamis.
F. Juma.....	Jumrah or Adina.....	Juma.....	Aruba.....	Juma.
Sa. Juma ertesi.....	Shambah Hafta Sunnoocher.....	Shifyar.....	Shifyar.....	Sabti.

#### THE CHINESE.

like all the nations of the north-east of Asia, reckon their time by cycles of 60 years; instead of numbering them as we do, they give a different name to every year in the cycle. As all these nations follow the same system, we shall detail it here more particularly. They have two series of words, one of ten, and the other of twelve words; a combination of the first words in both orders is the name of the first year; the next in each series are taken for the second year; and so to the tenth: in the eleventh year, the series of ten being exhausted, they begin again with the first, combining it with the eleventh of the second series; in the twelfth year, the second word of the first series is combined with the twelfth of the second; for the thirteenth year, the combination of the third word of the first list with the first of the second list is taken, that list also being now exhausted. To make this clearer, we shall designate

the series of ten by the Roman letters, that of twelve by the italics, and the whole cycle of 60 will stand thus.

1 a a	16 f d	31 a g	46 f k
2 b b	17 g e	32 b h	47 g l
3 c c	18 h f	33 c i	48 h m
4 d d	19 i g	34 d k	49 i n
5 e e	20 k h	35 e l	50 k o
6 f f	21 a i	36 f m	51 a p
7 g g	22 b j	37 g o	52 b q
8 h h	23 c l	38 h b	53 c r
9 i i	24 d m	39 i c	54 d f
10 k k	25 e n	40 k d	55 e g
11 a l	26 f k	41 a r	56 f h
12 b m	27 g e	42 b f	57 g i
13 c o	28 h d	43 c g	58 h j
14 d b	29 i s	44 d h	59 i l
15 e e	30 k f	45 e i	60 k m

The series of 10 is designated in China by the name of *tien kan*, or celestial signs. Their names are—1, *kia*; 2, *yih*; 3, *ping*; 4, *ting*; 5, *woo*; 6, *ku*; 7, *lang*; 8, *sin*; 9, *jin*; 10, *kwoy*.

The series of 12 are the *henary* characters, and are named *teche*, or terrestrial signs. Their names are—1, *tsze*; 2, *chew*; 3, *yin*; 4, *mao*; 5, *shin*; 6, *ssu*; 7, *woo*; 8, *we*; 9, *shin*; 10, *yaw*; 11, *wei*; 12, *kan*.

These characters being subjoined for their equivalent letters in the cycle, will show the Chinese name of every year; for example, *kia tsze* is the first year; *lang yin*, the 27th.

The Chinese months are lunar, of 29 and 30 days each. Their years have ordinarily 12 months, but a thirteenth is added whenever there are two new moons while the sun is in one sign of the Zodiac. This will occur seven times in nineteen years.

The boasted knowledge of the Chinese in astronomy has not been sufficient to enable them to compute their time correctly. In 1296 A.D., the Arab *Jomaheddin* composed a calendar for them, which remained in use until the time of the Jesuit *Adam Schaal*, who was the director of their calendar until 1664. It then remained for five years in the hands of the natives, who so deranged it, that when it was again submitted to the direction of the Christians, it was found necessary to expunge a month to bring the commencement of the year to the proper season. It has since that time been almost constantly under the care of Christians.

The first cycle, according to the *Romish Missionaries*, began February 2397 A.D.<sup>1</sup> We are now, therefore, in the 71st cycle, the 27th of which will begin in 1830. To find out the Chinese time, multiply the eclipsed cycle by 60, and add the odd years; then, if the time be before Christ, subtract the sum from 2396; but if after Christ, subtract 2397 from it; the remainder will be the year required.

The Chinese frequently date from the year of the reigning sovereign, and in that case there is no way of having the corresponding date but by a list of Emperors. We subjoin a list of those who have reigned for the last two centuries.

<sup>1</sup> Dr. Morrison carries it back to the 61st year of Hwang-te, 2696 A.C., making the present year to fall in the 74th cycle; but, according to the celebrated historian Choo-foo-tze, Hwang-te reigned about 2700 A.C., making 74½ cycles from that period, which is, probably more correct than either of the above statements.



TARTAR DYNASTY.

Ho-gung began to reign A.D.	1616.
Chwang-lee	1627.
Shan-che	1644.
Kang-he	1662.
Yang-ching	1723.
Keen-lung	1736.
Kia-king	1796.
Tsun-kwang	1821, now Emperor.

THE JAPANESE

have a cycle of 60 years, like that of the Chinese, formed by a combination of words of two series. The series of ten is formed of the names of the elements, of which the Japanese reckon five, doubled by the addition of the masculine and feminine endings, *je* and *to*.

1	kino-je	} wood.	The series of 12 is made up of the signs of the Zodiac.
2	kino-to		
3	hino-je	} fire.	
4	hino-to		
5	tsuno-je	} earth.	
6	tsuno-to		
7	kanzo-je	} metal.	
8	kanzo-to		
9	midzo-je	} water.	
10	midzo-to		
			1. ss, rat.
			2. oo, ox.
			3. thwa, tiger.
			4. ov, hare.
			5. jala, dragon.
			6. mi, serpent.
			7. sona, horse.
			8. teliana, sheep.
			9. ssr, wpc.
			10. teeri, hen.
			11. in, dog.
			12. y, hog.

By substituting these words for the letters in the cycle, under the head of China, the Japanese names are found. Thus, the first year of the cycle is called *kino-je ne*, the 35th, *tsuno-je in*, and so on. The cycles coincide with those of the Chinese; but a name is given to them instead of numbering them. Their years begin in February, and are luni-solar, of 12 and 13 months, with the intercalation as before mentioned under the head of China. The first cycle is said to begin 660 A.C.; but this cannot be correct, unless some alteration has taken place, as the Chinese cycle then began 667 A.C. We know, however, too little of Japan to pronounce positively respecting it; but thus far it is certain, that the cycle now coincides with that of the Chinese.

To an article of this nature, it may not be thought superfluous to append a slight notice of the manner in which some of the aboriginal tribes of America reckoned their time, before its discovery by the natives of Europe. The science of astronomy seems to have advanced there to a much greater extent than is commonly imagined. The extraordinary accuracy of the Mexicans in their computations, surpassing that of the Europeans of their time, cannot be accounted for otherwise than by the supposition that they had derived it from some people more civilized than themselves; and would appear incredible, if not well attested by Spanish authors of the fifteenth century, as well as by many hieroglyphic almanacs yet remaining, of undoubted antiquity. The Peruvians and Muzese had lunar years of great accuracy also; but this is less surprising, as the phases of the moon are sufficiently visible to the eye, and their returns frequent. We shall detail that of the Mexicans only.

The year of the Mexicans consisted of 365 days; it was composed of eighteen

months of twenty days each, and five additional, called *arasenteni*, or *year*. At the end of a cycle of fifty-two years, thirteen days were added; and at the end of another cycle, twelve days, and so on alternately, making an addition of twenty-five days in 104 years. This made the mean year to consist of 365 days, 5 hours, 46 minutes,  $9\frac{1}{2}$  seconds, being only  $2' 39\frac{1}{2}''$  shorter than the truth. As the wanton destruction of the Mexican monuments and hieroglyphic records by their cruel and barbarous conquerors has left little to study, and the extermination of the Mexicans of superior order has done away with their system, we shall not detail the names of their months and particulars of their cycles, which afford striking coincidences with those of the Tartars, Japanese, &c. We shall only add that their first cycle began in the month of January, A.D. 1096.

## INDIAN CHRONOLOGY.

Having completed, in the foregoing extract, a general and condensed account of the eras in use among other nations, we proceed to enter a little more into detail upon the peculiar chronological systems of the natives of India, drawing our information chiefly from Col. Warren's '*Kāla Sankalita*.'

There are a great variety of eras in use in different parts of India, but all may be classified under four general heads, according to the mode of expressing or of subdividing the year; and in this way it is proposed to notice them: namely, first, those which are founded on the sidereal divisions of the months; secondly, those which follow the intricate and peculiar luni-solar computations; thirdly, those reckoned by cycles, and in which the years are generally distinguished by names, a system which spread from India into Tibet, and was long before used in China and Japan; and fourthly, those derived essentially from the Muhammadan era, though they have since followed the ordinary reckoning of the country. The Hijra era itself is also universally employed by the Mussalmāns of India, but there will be no occasion to add to the description already given of this purely lunar year.

The present section will be confined to an account of the construction of the year by each system; the modes of comparison and the application of the tables being reserved for separate explanation.

### 1.—SOLAR OR SIDEREAL YEAR.

The Hindū Solar Year, as it is improperly called, is strictly sidereal; it contains that space of time during which the sun, departing from a given star, returns to the same in his apparent revolution through the zodiac. In the most ancient period of their astronomy,

before the introduction of the solar zodiac, the pandits placed the beginning of the year at the entrance of the sun into Āśvini, the first of the twenty-seven Nakshatras, or mansions of the fixed lunar zodiac. The solar zodiac was afterwards formed from the lunar one, about the year 1181 a.c. according to Bentley; the names of the months being taken from those of the lunar mansions in which the moon happened to be full in the year of its invention.

Bentley supposes that a lunar cycle, or luni-solar period, was about the same time discovered, there having been 3056 lunations in 247 years and one month, which caused the initial month of the year to change its name every 247 years; the first had been Āśvini, the second became Kārtika, etc., so that the date of an ancient author's writing may be roughly ascertained, should he happen to mention the name of the commencing month of the year. The following is a useful table of these lunar periods, which lasted until the year 538 A.D.<sup>1</sup>

PERIOD.	REGAR.	MONTH.	LUNAR ASTRONOMY CORRESPOND.
1.....	1 Sept. 1197 a.c.	1 Āśvini .....	Chaitra.
2.....	1 Oct. 945 .....	1 Kārtika .....	Vaiśākha.
3.....	29 " 698 .....	1 Agrahyana. <sup>2</sup> .....	Jyeshtha.
4.....	27 Nov. 451 .....	1 Pousha .....	P. Ashādha.
5.....	25 Dec. 204 .....	1 Māgha .....	Śrāvastā.
6.....	23 Jan. 44 a.c.	1 Phalguna .....	Satobhishā.
7.....	21 Feb. 203 .....	1 Chaitra .....	Bhādrapada.
8.....	22 Mar. 538 .....	1 Vaiśākha .....	Āśvini.

The adoption of the fixed sidereal zodiac of twelve signs is ascribed by Bentley with tolerable certainty (from the position of the equinoctial colure and the minimum errors of the 'Brahma-Siddhānta' tables) to this latter epoch; whence Vaiśākha has continued to be the initial month of the solar year to the present time. This month corresponds with the sign Mēsha or Aries of the fixed solar Hindū ecliptic.<sup>3</sup>

The Hindūs divide the year into six seasons (*ritu*), of two sidereal months each, the succession of which is always the same; but the vicissitudes of climate in them will depend on the position of the equinoctial colure.

<sup>1</sup> It is necessary to allude to this lunar division to show how Vaiśākha came eventually to be the first month of the solar year.

<sup>2</sup> Bentley supposes the former name of this month, Mārgaśīrṣa, to have been changed at this period, to denote its now commencing the year.

<sup>3</sup> According to the Hindū authorities, the year in which the zodiac was adjusted, or when the solar and sidereal zodiacs agreed, and there was no *śukra* or precession, was in 969, A.D.

TABLE I.—*The order and names in the Sanskrit, Hindi, and Tamil languages, of the signs, months, and lunar mansions.*

SEASONS.	SIGNS.	NAMES OF MONTHS.			SPECIAL REMARKS.	SYNCHRONISM OR LUNAR MANSIONS AS THEY COR- RESPOND IN 100 A.C.
		Sanskrit and Hindi.	Urdu.	Tamil.		Sanskrit.
1. Vasantā,	12 ♈	Chaitra,	Chait,	Paungul,	Si.	14 Chaitra.
	Mina.					15 Mīna.
	1 ♋	Vaiśākha,	Baisākh,	Chaitram,	V.	16 Vaiśākha.
	Mṛga.					17 Mṛgaśīrṣā.
2. Grishma,	2 ♊	Jyeshtha,	Jeth,	Vyāseel,	G.	18 Jyeshtha.
	Ṛjuna.					19 Ṛjuna.
	3 ♋	Aślāṣṭha,	Aslāḥ,	Āṣāḍ,	G.	20 Aślāṣṭha.
	Mithuna.					21 Mithuna.
3. Varsha,	4 ♋	Śravana,	Sarwa,	Āṣāḍ,	V.	22 Śravana.
	Karkatā.					23 Karkatā.
	5 ♊	Bhādra,	Bhādrā,	Āṣvini,	V.	24 Bhādra.
	Siṃha.					25 Siṃha.
4. Śarada,	6 ♏	Āyina,	Āṣā,	Paṇṇāsi,	Si.	26 Āyina.
	Kanyā.					27 Kanyā.
	7 ♏	Kārtika,	Kartik,	Āṣvini,	Si.	28 Kārtika.
	Tulā.					29 Tulā.
5. Hemanta,	8 ♏	Magarshatā or Māgharshatā.	Agar,	Kartika,	H.	30 Magarshatā.
	Ṛśabha.					31 Ṛśabha.
	9 ♏	Pauṣa,	Pō,	Mārgaḥ,	H.	32 Pauṣa.
	Dhanu.					33 Dhanu.
6. Śiśira,	10 ♏	Māgha,	Māgh,	Ty,	Si.	34 Māgha.
	Makara.					35 Makara.
	11 ♏	Pūṣyama,	Pūṣya,	Māṣaḥ,		36 Pūṣyama.
	Ṛmabha.					37 Ṛmabha.

The Hindūs employ the several following modes of considering the duration of the day :

1. The *Solasa*, or natural day, is the time between two consecutive sun-risings; therefore, this day is of variable duration. Its subdivisions are 60 *dhatus*, of 60 *vinadikas*, of 60 *vipalas*.

2. The *Saura*, or solar day, is the time during which the sun describes one degree of the ecliptic; consequently, longer or shorter as the sun is near the apogee or perigee: it is divided into 60 *śandas* (or *śalas*) of 60 *vikālas* each.

3. The *Nakshatra* day is the true sidereal day, being the time between the same point of the ecliptic rising twice. These are equal throughout the year, and are used in all computations. They are divided into *gharā* and *pālā* (called *vigharā* in the south), following always the same convenient sexagesimal division. The *pālā* is again divided into six *prāṇas* or 'respirations'; but the 'Sūrya-Siddhānta' and all astronomical works continue the subdivision by 60 throughout, thus:—

60 <i>kalapas</i> = 1 <i>lava</i> .
60 <i>lavas</i> = 1 <i>vinaska</i> .
60 <i>vinaskas</i> = 1 <i>kutka</i> .
60 <i>kutkas</i> = 1 <i>atipala</i> .
60 <i>atipalas</i> = 1 <i>vipala</i> = 0.4 second, English.
60 <i>vipalas</i> = 1 <i>pala</i> = 24 " "
60 <i>palas</i> = 1 <i>danda</i> = 24 minutes "
60 <i>dandas</i> = 1 <i>dina</i> or 1 'day' and night.
60 <i>dinas</i> = 1 <i>vris</i> or 'season.'

4. The lunar day, or *Nitāi*, is the 30th part of a lunation, and will be spoken of hereafter: it is used in astrological reckoning.

The division into weeks is also used, and the names of the days are derived from the planets, in precisely the same order as those of Europe.

TABLE II.—*Days of the week, with their synonyms in some other languages.*

ENGLISH.	ARABIC.	SYRIAC.	HEBREW.	CHINESE.
○ Sunday ...	Ravi-vār ...	El-dā ...	Gyah nyl-ma ...	Tsunng-ganvō.
☾ Monday ...	Som-vār ...	Ša-da-dā ...	" ša-ra ...	Tsunng-š.
☿ Tuesday ...	Mangal-vār ...	Ang-pulakayā-dā ...	" mig-amur ...	Ang-pa.
♀ Wednesday ...	Budh-vār ...	Ša-dā-dā ...	" thag-pa ...	Buddha-bū.
♃ Thursday ...	{ Vrihaḡan-vār or Gurū-vār }	Dev-lee-pa-thag-dā ...	" phar-ba ...	Kyha-padē.
♄ Friday ...	Sukre-vār ...	Ši-ke-ri-dā ...	" pa-sanga ...	Sak-kyū.
♅ Saturday ...	{ Sanīshar, or Sanī-vār }	Soma-ur-rūdā ...	" spen-pa ...	Chā-od.

(They have already been given in Persian, Hindostani, etc., in page 145.)

Each month contains as many days and parts of a day as the sun endures in each sign; the *evil* differing from the *astronomical* account only from its rejecting fractions of days; each civil year and month being accounted to begin at *sunrise*, instead of at the exact time of the sun's entrance into the respective signs on the strict astronomical computation. If the fraction exceeds 30 *ghorā* (half a Hindū day), then the civil year or month is accounted to begin one day later than the astronomical.

The portion of time assigned to each month further depends on the difference of time calculated for the passage of the sun through the northern and southern signs of the ecliptic, the time for the former being 186d. 21h. 38m. 24s., and for the latter, 178d. 8h. 34m. 6s.; the odd hours and minutes of which are applied to the beginnings of the year and months. The effect on civil reckoning is to produce differences in the relative lengths of the months of one or even two days more, or one day less, and to bring about a bisextile year of 366 days, as nearly as possible once in four years.

The unfixed lengths of the civil months renders it impossible to find the precise day corresponding to any other era, excepting by having

recourse to a calculation of the day of the week on which the Hindú civil month in question commenced, which, however, with the aid of the tables provided in Warren's excellent work from the bráhmanical formulae, becomes a very simple problem. The order of the days having remained invariable since they first received their names, if any duration of years be multiplied by the mean length of the year, and the result in days be divided by seven, the remainder will necessarily shew the day of the week (counting from the epoch or initial day<sup>1</sup>), on which the period terminates.

Tables of roots, or moments at which particular epochs commence, such as centuries, will serve to facilitate this calculation, which, in fact, renders the system of the Hindú year more simple in expounding than those of the West, which are liable to secular variations.

A table of roots, as they are called, may in like manner be prepared for the durations of the months singly and collectively, so that by simple addition (rejecting sevens) the initial day of the required Hindú civil month may be accurately found. The dominical letter furnishes the same means of finding the day for any European date, and any two approximate dates may be thus brought to correspond precisely by the intervention of the weekly *feria*. Further explanation and examples of this process will be found in the pages of *Calendric Scales*, which we shall presently introduce for the purpose of simplifying the transposition of dates from one calendar to another.

It is impossible to enter into further particulars of the formation of the Hindú year without considerable knowledge of their astronomy; but it may be as well to state, that all the calculations of their books depend upon the hypothesis of four grand periods, comprising together 4,320,000,000 years, called a 'Mahá-Yug,' or great epoch of the conjunction of the planets in the beginning of the Hindú zodiac.

The four divisions of the 'Mahá-Yug' are called the 'Satya-yug,' the 'Tretá-yug,' the 'Dwápara-yug,' and the 'Kali-yug,' which latter commenced in March 3102 a.c., and is still current. All astronomical calculations start from this epoch, using the mean motions prescribed, which, by the nature of the system, are all whole numbers, although they vary in different authors, as the progress of observation suggested corrections. The three principal systems are set forth in the 'Bráhma-' 'Súrya-' and 'Árya-' 'Siddhántas,' which Bentley has proved to have been framed respectively about the years 538, 1068, and 1322, A.D. The year by the 'Súrya-Siddhánta' consists of 365d. 15g. 31v. 31p. 24s., and by the 'Árya-Siddhánta,' 365d. 15g. 31v. 15p., which, expressed

<sup>1</sup> This, for the commencement of the Kali-yug, is Friday in the 'Súrya-Siddhánta.' In the epochs used in the 'Árya-Siddhánta,' it is Sunday.

in the European method, will be 365d. 6h. 12m. 36s. 34f.; and 365d. 6h. 12m. 36s. respectively. The latter is employed in the south of India: it differs from the Gregorian reckoning one day in sixty years, the amount of the equinoctial precession. The following table gives a general view of the planetary system according to the above authorities, and that of the 'Parasara-Siddhanta,' another authority supposed by Bentley to be nearly coeval with that of Aya Khut.

TABLE III.—General view of the different Hindú Planetary Systems.

Revolutions of	'Brahma-Siddhanta.'	'Surya-Siddhanta.'	'Ārya-Siddhanta.'	'Parasara-Siddhanta.'
The sun...	4,320,000,000	4,320,000,000	4,320,000,000	4,320,000,000
The moon...	57,753,500,000	57,753,536,000	57,753,554,000	57,753,534,114
Mercury...	17,937,998,994	17,937,994,000	17,937,954,071	17,937,955,474
Venus...	7,022,389,492	7,022,374,000	7,022,371,432	7,022,372,148
Mars...	2,396,828,522	2,396,832,000	2,396,831,000	2,396,833,037
Jupiter...	364,226,453	364,226,000	364,219,682	364,219,954
Saturn...	146,567,298	146,568,000	146,569,000	146,571,813
Equinoxes...	106,889	699,000	678,129	581,709
No. of days	1,577,916,460,000	1,577,917,828,000	1,577,917,642,000	1,577,917,670,000
Apsides—				
Sun...	480	587	481	480
Moon...	488,105,433	488,202,000	488,108,674	488,104,034
Mercury...	332	388	339	336
Venus...	532	539	538	526
Mars...	293	294	299	327
Jupiter...	838	960	830	982
Saturn...	41	59	36	54
Nodes, (retrograde)				
Moon...	232,311,168	232,238,000	232,313,354	232,313,235
Mercury...	511	488	524	648
Venus...	892	902	947	893
Mars...	267	214	298	245
Jupiter...	69	174	96	190
Saturn...	594	682	670	630
Revolutions of the Rishis in an exclusive epoch...			1,599,998	1,599,998

To find the number of lunations, deduct the sun's revolutions from those of the moon, the remainder is the number sought. The mean annual motion of a planet is found by dividing its revolutions by 4,320,000,000, and their mean places at any epoch of the Kali-Yug ( $k$ ) by the common rule of three, as, 4,320,000,000 : revolutions in a Mahā-kalpa : :  $k$  : even revolutions and fraction, the latter to be converted into longitude on the Hindú ecliptic.

## ERAS DEPENDENT ON THE SOLAR YEAR.

The Hindú solar or sidereal year is used in India, south of the Nar-



bada, in Bombay, in Bengal, in Tihāt, and Nipāl. The two principal eras in use are: 1. The Kali-Yug, dated, as before stated, from the equinox of March, 3102 a.c.; 2. The 'Śāka,' dating from the birth of Śālivāhana, a mythological prince of the Dakhan, who opposed Vikramāditya, the Rāja of Ujjāyini.

This era, called 'Śāka,' (a word of the same import,) commences on the 1st Baisākh, 3179, x.v., which fell on Monday, 14th March, 78, a.d. Julian style. Several other styles seem to be connected in origin with it:

The Śāka of Bengal, as above ..... = 78 a.d. = 3179 x.v.

The Burmese epoch, used at Prome ..... = 79 a.d. = 3180 x.v.

The Aji Śāka, used in Java ..... = 74 a.d. = 3176 x.v.

The Bali year ..... = 81 a.d. = 3182 x.v.

The Bengālī San, and the Villayati year of Orissa, etc., will be hereafter mentioned under the fourth division.

## II.—HINDU LUNI-SOLAR YEAR.

The circumstances of the Indian luni-solar year differ from every other mode of dividing and recording time that has been employed in ancient or modern times. Some similarity had been remarked, in the secular omission of a month, to the Chaldean system; and, at a particular period, the common intercalations concurred with those of the lunar cycle of Meton, which led the learned to imagine them derived from the same source; but Warren has proved from a minute analysis of the Hindū 'Chandra-Māna,' that it has no further similitude to other systems than its dependence on the moon's motions must naturally induce.

The ordinary year, called 'Samvat-sara,' or 'mana,' is divided into twelve lunar months; an intercalary month (called in Sanskrit *adhika vulga*, 'lound') being supplied, on a particular principle, once in about three years.

The year commences at the true instant of conjunction of the sun and moon: that is, on the new moon which immediately precedes the commencement of the solar year: falling somewhere therefore within the 30 or 31 days of the solar month Chait (*Chaitra*). The day of conjunction (*amāvasyā*) is the last day of the expired month: the first of the new month being the day after conjunction.

Although the initial element of the year is thus determinate, there are two modes of reckoning the month. In the south of India they begin contemporaneously with the year, on the conjunction (*amāvasyā*), and run through the 30 days in two divisions of about 15 days, called *śukla*- or *śukla*-*pakṣa*, and *kṛishna*- or *kṛishna*-*pakṣa*, the light- and the dark- half, or wax and wane, of the moon.

The 'Vrihaspati-Māna,' however, which is derived from the 'Sūrya-Siddhānta,' and is followed throughout Hindūstān and Telīngana, makes the months commence with the full moon (*pūrṇimā*) preceding the last conjunction; so that new-year's day always falls in the middle of the lunar month Chait, and the year begins with the last *pakṣa*, or light-half of that month.<sup>1</sup>

The lunar months are in all cases named from the solar month in which the *amāvasyā*, or 'conjunction' happens, so that when two new moons fall within one solar month, (for example, on the 1st and on the 30th days,) the name of the corresponding lunar month is repeated, the year being then intercalary, or containing 13 months. The two months of the same name are distinguished by the terms *adhika* 'added,' and *nija*, 'proper' or 'ordinary.'

By the 'Sūrya-Siddhānta' system, the intercalated month takes its place in the middle of the natural month; that is, of the four *pakṣas*, 1, *badī*, 1, *audī*, 2, *badī*, 2, *audī*,—the first *badī* and second *audī* belong to the natural month, and the first *audī* and second *badī* to the intercalated month. The Tamil account makes the first month of the two the intercalated one.

It happens once within each term of 100 years, that there is no new moon in some one of the last six lunar months, which, from the sun being in perigee, as before explained, contain only 30 and 29 days each. On these occasions the month of that name is expunged; but it always happens that two others in the same year are for the opposite cause repeated in such years.

The common intercalary year is called *adhika-samvat-sara*; the double intercalary, with its expunged month, *lekhya-samvat-sara*.

The lunar month, whatever may be its civil duration, is divided into 30 *tithis*, or lunar days, which are subject to similar rules regarding intercalation and omission. When two *tithis* end in the same solar day, the intermediate one is struck out of the calendar, and called a *lekhya-tithi*: when no *tithi* begins or ends in a solar day, the *tithi* is repeated on two successive solar days, and the first is called *adhika*. When a *tithi* begins before or at sunrise, it belongs to the solar day about to begin: when after sunrise, it is coupled with the next solar day, provided it does not end in the same day; in which case, it would be expunged out of the column of *tithis*, as before explained.

To render this singular mode of computation more perplexing, although the *tithis* are computed according to apparent time, yet they are registered in civil time.

<sup>1</sup> Hence has doubtless arisen the variance in the names of the Tamil and Bengali months, the former being in name one month behind the others: (See the table of their solar year, page 156).

It is usual, however, to make account of the days in the semi-lunar periods, by the common civil reckoning, beginning (as with the years) after the completion of each diurnal period; thus, the day on which the full moon occurs is the *Sadi* 14th or 15th, and the following day is the 1st *Badi*. It is like our reckoning of the sun's place in the zodiac ( $0^{\circ} + 10^{\circ}$ , etc.  $1^{\circ} + 10^{\circ}$ , etc.), and is evidently better adapted for computations than where the current day or year is the one expressed by the figure.

The circumstance of expanding a *tithi* happens, on an average, once in 64 days; so that in one year it recurs five or six times. When a *tithi* is repeated twice it is called *tridina*: one *tithi* is equal to 0.984 of a day, or 64 *tithis* = 63 days nearly.

To understand the nature of this singular disposition of time, a diagram of an entire lunar month has been inserted in the page containing the scale for the comparison of the luni-solar year, the month selected being the intercalated, or *adhika*, *Chaitra* of the 4924th luni-solar year of the Kali-yug, (A.D. 1822-3), a year in which Davis had ascertained that there would be a *lekha* month, and two intercalaries. Warren's book contains the calendar for the whole year in question.

To that work we must refer for the complete solution of the problem of its construction for all cases that may present themselves, wherein perfect accuracy is requisite. The rules which we shall give hereafter will be found sufficient to bring out the result to within a day or two of the corresponding Hindú solar year, and to even closer accordance with the Christian year, in which the days are not liable to the same variations *infer* *se*. The elements required for working it out thus far, on the supposition of the sun and moon both maintaining a mean rate of motion in their course, are few, and may mostly be determined from the tables in the present epitome. They are:

1. The sun's mean place in the Hindú ecliptic, and the skeleton of the solar months, formed therefrom, to show the disposition of the civil and sidereal days.

2. Also the moon's mean place in the ecliptic, which is found from the *Ahargana*, or sum of days expired from the commencement of the Kali-yug to the beginning of the proposed lunar year: it is necessary for obtaining the epochs of the mean conjunctions, during the year in question.

3. The *Sata-Dina*, or day of the week on which the initial conjunction falls. The two latter elements are given for every year of the last three centuries in the second General Table. For periods anterior to 1600, they may be found by adding the secular *Aharganas* for the broken period, to the root for the nearest epoch, contained in a separate table (VIII.) prepared for the purpose, from the data of the

'Sūrya-Siddhānta.' Taking, then, the scheme of the corresponding solar year, and placing the two skeletons thus formed, in juxtaposition, the eye will at once tell what months or days will become subject to the rules of *kṣaya* or *addhā*, 'expunging' or 'duplication': an example of the process will be given hereafter, in explaining a luni-solar scale contrived for working out the problem by simple inspection.

The place of the sun's and moon's apogees, the equinoctial precession, and the obliquity of the ecliptic, etc., are necessary for the true computation of the lunar days; but this degree of accuracy is beyond our present purpose.

The elements of the solar system (see page 153), would indeed furnish even these data, were it requisite; but the several equations of the sun's and moon's motions, and the gnomonic problem to convert the determinations, made for Lankā, to other situations on the globe, would call for a thorough acquaintance with the astronomical system of the Brāhmana. Where an English ephemeris is accessible, the construction of the Hindū lunar month may readily be effected for any given lunation from the times of new and full moon, corrected for the longitude of the place: it may be remembered, as a general rule, that the first day of every Hindū luni-solar month falls on the day following the new moon; and that it precedes by two days the initial *feria* (as it is called) of the Mahammadan lunar month, seldom diverging from this arrangement more than one day on either side: this is, of course, without reference to the names of the months, as those of the Hijra are continually gaining upon the others.

#### ERAS DEPENDENT ON THE LUNI-SOLAR YEAR.

##### ERA OF VIKRAMĀDITYA.

The principal era to which the luni-solar system is exclusively adapted is that of Vikramāditya, called *Samvat*, or vulgarly *Sambat*. The prince from whom it was named was of the Tuir dynasty, and is supposed to have reigned at Ujjain (Ujjāyinī) 135 years before Śālivāhana, the rival founder of the Śaka era, south of the Narbada (Narmada) river. The Samvat era commenced when 3044 years of the Kali-yug had expired; i.e. 57 years *a.c.*, so that if any year, say 4925, of the Kali-yug be proposed, and the last expired year of Vikramāditya be required, subtract 3044 therefrom, and the result, 1881, is the year sought. To convert Samvat into Christian years, subtract 57; unless they are less than 58, in which case, deduct the amount from 58, and the result will be the date *a.c.*

The era of Vikramāditya is in general use throughout Telingana and Hindōstān, properly so called; it is less used, although known, in Bengal, Tirhāt, and Nipāl; and, according to Warren, is nearly unknown

in the peninsula. The luni-solar division of the year, however, is necessarily adapted to other eras, conjunctively with the solar division, because almost all the festivals and religious observances of the Hindus and Buddhists depend upon the *Chandra-māsa* or lunar reckoning. There can, therefore, be hardly said to be any era exclusively solar, although the Samvat is exclusively luni-solar.

#### THE BALABHI AND SIVA-SINHA ERAS.

The Balabhi era is mentioned by Tod as occurring in an inscription found at Somnāth, and from its locality and connection with the Samvat, it must have been of the same construction, merely dating from a newly assumed epoch, which is shown in the 'Annals of Rājasthān,' to correspond with 875 of Vikramāditya, or 318 A.D. Balabhi was destroyed in 802 Samvat, when it may be presumed the era was discontinued.

A third era, called the 'Siva-Sinha Samvat,' is also noticed by the same author as having been established by the Gohils in the island of Deu: its epoch or zero corresponds with 1169 Vikramāditya Samvat (1112 A.D.)

The Fasli (vulgarly, Faslee or Fusly) year, of Upper India, also follows the Samvat division, as being the system in vogue where it was introduced: this will be alluded to again under the fourth head.

### III.—YEARS NUMBERED BY CYCLES.

#### ERA OF PARASURAMA.

This division of time Warren states to be used in that part of the peninsula of India, called Malayāla by the natives, extending from Mangalor, through the provinces of Malabar, Cotiate, and Travancore, to Cape Comorin. It derives its name from a prince who is supposed to have reigned 1176 years B.C., the epoch being 7th August, 3537 Julian Period, or 1925 Kali-yug. This era is reckoned in cycles of 1000 years. The year itself is solar, or rather sidereal, and commences when the sun enters the sign Kanyā (Virgo), answering to the solar month 'Āsan' (Āswina). The commencement of the 977th year of the 3rd cycle concurs with the 1st Āswina of 1723 Śāka, and 14th Sept. A.D. 1800.

#### THE GRAHAPANVARTI CYCLE OF NINETY YEARS.

The southern inhabitants of the peninsula of India use a cycle of ninety years, which is little known, according to Warren, in the Karnātak. This cycle was analyzed by the Portuguese missionary Baschi, while

resident for forty years in Madarâ. The native astronomers there say it is constructed of the sum of the products in days of 15 revolutions of Mars, 22 of Mercury, 11 of Jupiter, 5 of Venus, 29 of Saturn, and 1 of the Sun.

The epoch of this cycle occurs on the expiration of the 3078th year of the Kali-yug, in 24 a.c. The years follow the ordinary solar or sidereal reckoning. The concurrent cycle and year for any European year may readily be found by adding 24 and dividing by 90: thus 1830 A.D. =  $\frac{1830+24}{90} = 20$  cycles, 54 years.

#### THE VRIHASPATI-CHAKRA, OR 'CYCLE OF JUPITER.'

The cycle of Jupiter is supposed by many to be one of the most ancient modes of reckoning time, not only in India, but in Asia generally; but we shall show presently, that with regard to the former country, at least, it is most probably of comparatively modern introduction. It has been, however, known from time immemorial in China, where it partakes of the same peculiarity as on the continent of India, of having separate names for each year of the cycle; but these names are curiously compounded of two series of twelve and five names in the Chinese system, as has been fully explained in page 146, whereas, in India the series of single appellations continues through the sixty years.

The origin of the Vrihaspati-Chakra is unknown: it has been imagined by some to be the same as the Chaldean Soos, but, Warren thinks, without foundation. It is mentioned in the 'Sârya-Siddhânta,' and other works, and is constructed on astronomical principles, although its genuine application in reference to Jupiter's revolutions has long since fallen into disuse in the south of India, as well as in China and Tibet; and this circumstance will furnish a clue to ascertain the epoch of its introduction into these countries; but we must first describe the different systems followed.

There are three rules for computing the years of the Jovian cycle: 1, that of the 'Sârya-Siddhânta,' followed in this part of India; 2, that of the 'Jyotistava'; 3, that of the Telingas, followed in the south.

According to the first, Jupiter's revolutions being 364,220,000 in a 'Mahâ-yug' (see the table in page 153); his motion in one solar year coincides very nearly with one sign of the zodiac ( $1^{\circ} 00' 21'' 4'''$ ). The actual time, therefore, of the planet's passing through one zodiacal sign (which is called a year of Jupiter) is, as  $30^{\circ} 21' 04''$ : 365d. 15g. 31p.: :  $30^{\circ}$ : 861d. 2g. 5p., the true duration of the Chakra year. The difference, or four days and thirteen *ghaṭikas* short of the solar year, will in eighty-six years amount to a whole year; so that, to keep the cycle in



accordance with the planet's heliocentric motion, one year must be expunged in that period of time.

To find the current year of the cycle on this principle for any year of the 'Kali-yug' (say the beginning of 4870 A.D.) we have—

As 432,000 solar years to 36,422 revolutions of Jupiter, so 4870 to 410 rev. 7 signs,  $2\frac{1}{2}^\circ$ ; the odd signs and degrees give his longitude, which requires a small correction, or *bij*. Then multiplying 410 by 12, and dividing by 60, we have 82 cycles and 7 years: the latter to be counted always from the 27th of the cycle, or *Vijaya*, gives the 33rd year, or *Vikari*.

2nd Method. The 'Jyotistava' rule expounds the last year expired of the cycle, setting out from the Śaka epoch, and reckoning from *Prabhava*, as the first of the cycle. The rule is as follows:—

Note down the Śaka year in two places. Multiply one of them by 22, and add 4291 to the product. Divide by 1875.<sup>1</sup> Add the integers of the quotient to the 2nd number noted down, and divide by 60. The remainder will show the last year expired from *Prabhava*. The fraction left by the divisor, 1875, may be reduced to months and days of the current year.

Example: 4870 Kali-yug = 1091 Śaka  $\frac{1091 \times 22 + 4291}{1875} = 22 \frac{37}{1875}$  and  $\frac{1091 \times 22}{60} = 28 \frac{337}{60}$ ; the fraction  $\frac{337}{60} = 5$  months  $17\frac{1}{2}$  days of the 23rd current year, or *Vikari*, which agrees nearly with the former account.

The effect of the difference between the two systems is, that the expunged year in the 'Jyotistava' reckoning occurs thirteen years antecedent to that of the 'Sūrya-Siddhānta'. The second General Table follows the latter account, which must be borne in mind when consulting the *chakra* column.

This form of the Vrihaspati-Chakra prevails throughout Bengal, but little more than the name is ever attended to.

3rd Method. The 'Telanga' rule takes no notice of the commencement of the Vrihaspati year, which it identifies in duration with the Chandra-māna, or common luni-solar account: thus it directs to

Divide the expired years of the Kali-yug by 60, the quotient will give the number of cycles expired, and the remainder the odd years, to be reckoned from *Pravratā* the 13th of the Chakra.

Example: For the year 4870 Kali-yug  $4870 \div 60 = 81$  cycles, 10 years, or *Sarva-dhārī*, the 22nd, as expired. *Pravratā*, the 23rd, will be the current year sought.

This is the rule followed in the peninsula, and it coincides with the practice of Tibet, as appears from the following particulars, for which we are indebted to M. Csoma de Kőrös's researches:—

#### TIBETAN CALENDAR.

In Tibet the cycle of Jupiter is employed; but as the Sanskrit

<sup>1</sup> Multiplying by 22, and dividing by 1875, is equivalent to dividing by 85.227, the period when a year is to be expunged by this system.



literature was there introduced at a late period, this country presents the anomaly of preserving two series of denominations for the Chakra years: one derived from the Chinese by exact translation, and the other in a similar manner copied from the Indian cycle.

The whole Tibetan calendar is, indeed, copied from the Indian; giving the solar and lunar days, the *nakshatras*, *yogas*, and *karanas*; with the usual lucky and unlucky days. The months are divided into *kar-choks* and *wak-choks*, or bright and dark halves, etc. The astronomical year begins with the vernal equinox (sidereal) on the first Baisakh, but the civil year commences differently in different parts of Tibet, varying from December to February. At Ladakh it begins in December. The Hore or Turks keep their new year some days after the winter solstice in January; and the people of Utsang at Lassa commence theirs with the new moon of February. The months have several names expressive of the seasons, asterisms, business undertaken in them, etc., but they are usually denominated numerically; first, second, etc. The year is luni-solar with intercalations.

The only fixed epoch in Tibet appears to be the birth or death of Śākya, from which event the almanacks note the years elapsed; sometimes also they note the year from the death of the two great Lamas of Lassa and Teshi-lunpo, or their re-incarnations within the last two centuries, and other memorable events.

The Tibetans, in estimating their age, especially in conversation, count by the cycle of 12 years (which is, in fact, the true cycle of Jupiter).

In the ordinary business of life, the cycle of 60 years is universally employed, in which each year has its distinct name. The cycles themselves are not distinguished numerically, but are rendered intelligible by the mention of some coincident event or remarkable person of the period, a mode highly objectionable for remote dates.

The order of the years agrees precisely with the Tamil account to the present time, having no expunged year. But the Tibetans do not count from the same fixed epoch. Their authors on the 'Kala-Chakra' system state that the mode of reckoning by cycles of 60 years was introduced into India about the year 965 A.D., and that 60 years afterwards it was adopted in Tibet (about 1025-6 A.D.) Their epoch, therefore, occurs in 1025 A.D.

Now, it is remarkable that the 69th cycle of the 'Śūrya-Siddhānta,' and the 16th cycle of the 'Jyotiṣṭava,' and the 68th cycle of the Telinga astronomers, were all completed in 965-6 A.D., which is not much prior to Bentley's epoch of Varaha Mihira, the supposed author of the former work.

<sup>1</sup> See a note by M. Ceoma, on this subject, in the 'Jour. As. Soc.', vol. ii. p. 57; [and the quotation from Al-Bīrūnī (Reinoud's 'Fragments'), *infra*, p. 167.]

Moreover, the two systems, starting from the point thus assumed, would up to the present period (on account of the omitted years in the one) diverge between 10 and 11 years from one another, which is actually the case, the year 1834 A.D. agreeing with the 39th year of the Bengal cycle, and with the 28th of the Tamil and Tibetan account.

That the cycles did not commence either with the Kali-yug or with the Saka epoch is proved by the two rules given above for expounding their dates, which expressly state that the odd years are to be reckoned from *Vijaya* (the 27th) and *Prasasti* (the 13th) respectively, and not from *Prabhava* (the 1st) as would naturally be expected.

It is not, therefore, unreasonable to conclude that the theory of the Vrihaspati-Chakra was invented or introduced in India, as affirmed by the Tibetan authorities, in the middle of the tenth century; and this might be adduced as a confirmation of the date assigned by Bentley to the 'Sūrya-Siddhānta,' which upholds and expounds that cycle.

M. Cauma states that before the introduction of the cycle of Jupiter into Tibet, frequent mention is made in their books of a period of 403 years, called *mi-lha-yya-tsho*, a symbolical name for the number 403; and dates are always expressed in it, as the 80th, 240th, or any other year of this period: now it is curious, as M. Cauma remarks, that if 403 be deducted from 1025 A.D. the remainder, 622 A.D., exactly coincides with the epoch of the Hijra, leaving an impression that the latter era had been once established there. The destruction of the Buddhist religion in the north is ascribed to the Muhammadans by the Tibetan authors.

We subjoin a catalogue of the Sanskrit, Tibetan, and Chinese names of the sixty Chakra years, with an English translation of the last two. The Sanskrit names have also a meaning which is precisely rendered in Tibetan. But they have no reference to any precise objects, and are therefore not worth insertion.<sup>2</sup> It should be remarked that the first year of the Indian series corresponds with the fourth of the Chinese, which goes far to disprove the connection of the two cycles; for had the discrepancy been owing to the different modes of reckoning (as with the 'Sūrya Siddhānta' and the Telinga), the divergence would have been at the other end of the scale; unless, indeed, it should have run through 56 years, which would have occupied nearly 56 centuries.

<sup>1</sup> See 'Jour. As. Soc.,' vol. (ii.) p. 6: *Opa-tsho*, 'a lake' = 4; *Kha*, 'void' = 0; and *mi*, 'fire' = 3.

<sup>2</sup> The latter names are extracted from Warren's 'Kāla Sankalita;' the Chinese from Du Guignes' 'Histoire des Huns;' and the Tibetan from M. Cauma's forthcoming 'Grammar of the Tibetan Language,' now under publication.

TABLE IV.—*Names and Numbers of the Vrihaspati-Chakra, or 60 years' Cycle of Jupiter, in Sanskrit, Tibetan, and Chinese.*

	Sanskrit Names	Tibetan translation of Sanskrit Names.	Tibetan translation of Chinese Names.	Chinese Names	Meaning of Chinese names.	ॐ ८
1	Prabhava.	Rab-hyang.	Mé-yos.	Ting-mao	Fire-hare.	4
2	Vibhava.	c Nam-Hhyang.	Sa-Hbrag.	Yen-chin.	Earth-dragon.	5
3	Sukla.	Dkar-po.	Sa-Sheral.	Kiao.	Earth-serpent.	6
4	Pranulha.	Rab-nyos.	Chags-r Ta.	Keng-on.	Iron-horse.	7
5	Prājapati.	Skyé-bdag.	lChags-bag.	Sin-sui.	Iron-sheep.	8
6	Angira.	Angira.	Ch'ku-apre.	Qin-chin.	Water-sheep.	9
7	Srimukha.	Dpal-Qdeng.	Ch'ku-bya.	Kuei-yuen.	Water-lord.	10
8	Udhata.	Dnos-po.	Shing-k'nyi.	Kin-ou.	Wood-dog.	11
9	Yuvā.	Sa-tshod-dien.	Shing-Pdag.	Yhai.	Wood-hog.	12
10	Dhātā.	Hdān-hyā.	Mé-byi.	Ping-tse.	Fire-mouse.	13
11	Iowara.	Dyang-p'hyag.	Mé-glang.	Ting-tshen.	Fire-ox.	14
12	Bahudānya.	Hwa-mang-po.	Sa-Stag.	Yen-ye.	Earth-tiger.	15
13	Pranūthi.	Myos-lān.	Sa-yen.	Ki-mao.	Earth-hare.	16
14	Vikrama.	r Sam-Qson.	lChags-Hbrag.	Keng-chin.	Iron-dragon.	17
15	Brīya.	K'hyu-Mā'bag.	lChags-Sheral.	Sin-se.	Iron-serpent.	18
16	Chitrakānu.	Sna-t'hepa.	Ch'ku-rTa.	Qin-ou.	Water-horse.	19
17	Sūbhānu.	Nyi-ma.	Ch'ku-bag.	Kuei-sui.	Water-sheep.	20
18	Tōma.	Nyi-Sgarol-hyā.	Shing-apre.	Kia-chin.	Wood-sheep.	21
19	Parthiva.	Sa-kyang.	Shing-byu.	Y-yen.	Wood-lord.	22
20	Vyūya.	Mé-zā.	Mé-K'nyi.	Ping-ou.	Fire-dog.	23
21	Sarvajit.	thams-chad-Hdal.	Mé-Pdag.	Ting-hai.	Fire-hog.	24
22	Sarvadhart.	Kan-Hdān.	Sa-byi.	Yen-tse.	Earth-mouse.	25
23	Virodhi.	Hgal-ya.	Sa-glang.	Ki-tshen.	Earth-ox.	26
24	Vikrita.	c Nam-nyā.	lChags-Stag.	Keng-ye.	Iron-tiger.	27
25	Khara.	Pang-bu.	lChags-yen.	Sin-mao.	Iron-sheep.	28
26	Nandana.	Dgal-ya.	Ch'ku-Hbrag.	Qin-sui.	Water-dragon.	29
27	Vijya.	c Nam-Hgyar.	Ch'ku-Sheral.	Kuei-se.	Water-serpent.	30
28	Jya.	c Nyā-ya.	Shing-rTa.	Kin-ou.	Wood-horse.	31
29	Manmāka.	M'yu-hyā.	Shing-bag.	Y-sui.	Wood-sheep.	32
30	Darmakha.	Qdeng-nān.	Mé-Spre.	Ping-chin.	Fire-sheep.	33
31	Hōmaloma.	Qdeng-Hyānyag.	Mé-byu.	Ting-yen.	Fire-lord.	34
32	Viloma.	c Nam-Hyānyag.	Sa-K'nyi.	Yen-se.	Earth-dog.	35
33	Vikrit.	Sgyar-byā.	Sa-Pdag.	Ki-hai.	Earth-hog.	36
34	Sarvri.	Kan-lān.	lChags-byi.	Keng-tse.	Iron-mouse.	37
35	Piava.	H'har-ya.	lChags-glang.	Sing-tshen.	Iron-ox.	38
36	Sushakrit.	Dgā-byā.	Ch'ku-Stag.	Qin-ye.	Water-tiger.	39
37	Sobhana.	Mānā-hyā.	Ch'ku-yen.	Kuei-mao.	Water-hare.	40
38	Krodhi.	K'hu-mo.	Shing-Hbrag.	Kia-chin.	Wood-dragon.	41
39	Vimāvan.	Sna-t'hepa-Dryā.	Shing-Sheral.	Y-se.	Wood-serpent.	42
40	Parābhava.	Zā-Qson.	Mé-rTa.	Ping-ou.	Fire-horse.	43
41	Plavanga.	Spreha.	Mé-Lag.	Ting-sui.	Fire-sheep.	44
42	Kilaka.	P'har-bu.	Sa-Spre.	Yen-chin.	Earth-sheep.	45
43	Samsya.	Zhi-ya.	Sa-byu.	Ki-yen.	Earth-lord.	46
44	Sūdhāma.	c Nam-mang.	lChags-K'nyi.	Keng-tu.	Iron-dog.	47
45	Virodhakrit.	Hgal-byā.	lChags-Pdag.	Sin-lai.	Iron-hog.	48
46	Paridhāri.	Yong-Hdān.	Ch'ku-byi.	Qin-se.	Water-mouse.	49
47	Prasādi.	Rag-sui.	Ch'ku-rLang.	Kuei-tshen.	Water-ox.	50
48	Amāda.	Kan-Dgal.	Shing-Stag.	Kia-ye.	Wood-tiger.	51
49	Rakshasa.	Srin-bu.	Shing-yen.	Y-mao.	Wood-hare.	52
50	Anala.	Mé.	Mé-Hbrag.	Ping-chin.	Fire-dragon.	53
51	Pingala.	Dmar-Ser-chin.	Mé-Sheral.	Ting-se.	Fire-serpent.	54
52	Kālayukta.	Das-kyi-pho-nyi.	Sa-rTa.	Yen-se.	Earth-horse.	55
53	Siddhāri.	Dam-grub.	Sa-bag.	Ki-sui.	Earth-sheep.	56
54	Randā.	Drag-po.	lChags-Spre.	Keng-chin.	Iron-sheep.	57
55	Darmati.	c Lo-nan.	lChags-byu.	Sin-yen.	Iron-lord.	58
56	Dandabhi.	ma-ch'ben.	Ch'ku-K'nyi.	Qin-se.	Water-dog.	59
57	Budicōdgar.	K'hang-Skyag.	Ch'ku-Pdag.	Kuei-hai.	Water-hog.	60
58	Raktāksha.	Mig-Dmar.	Shing-byi.	Kin-tse.	Wood-mouse.	1
59	Krodhana.	Khu-ya.	Shing-gla.	seu.	Wood-ox.	2
60	Kshaya.	Zad-po.	Mé-Stag.		Fire-tiger.	3

## ERA OF BUDDHA.

USED IN CEYLON, AVA, TIBET, SIAM, ETC.

The determination of the epoch of Buddha, Gotama or Sākya, has engaged the attention of many learned Orientalists, and although there remain some discrepancies in the results arrived at, most of these may be explained and reconciled by assuming that several individuals of the same character have existed, at different epochs, or that the system of Buddhism has been at these times revived or re-organized.

Omitting all mention of the earliest Buddhas, such as the one who figures at the head of the lunar race of Hindū mythology, it may be advanced with tolerable confidence that the two latest of the epochs attributed to this personage are founded on actual events, from the near coincidence which may be observed in the statements of distant nations regarding them. A critical notice on the subject by Prof. Wilson, appeared in the 'Oriental Magazine' for 1823, which furnishes the following data for the epoch of, what may be called, the Elder Buddha.

According to Padmasarpo, a Lama of Bhutan, who wrote in the 16th century (made known by M. Cousin de Körbe) .....	B.C. 1058
By Kalhana Pandit, author of the history of Kashmir .....	1332
" Abū'l-Fazl, probably following the last .....	1356
" A couplet from Chinese historians .....	1036
" De Guignes' <i>Rossarion</i> .....	1027
" Giorgi, (period of Buddha's death) .....	939
" Bailly .....	1031
" Sir William Jones .....	1027
" Bentley, one occasion, 1081; on another .....	1094
" Juchrig, from a Mongol Chronology, published by Pallas .....	991
" Japanese Encyclopædia, birth of Buddha .....	1027
" " " his death .....	990
" Matsumura-lin, a Chinese historian of the 12th century .....	1027
" M. Klaproth himself, concurring with Sir William Jones .....	1027
M. Rémusat dates the death in .....	970
The era adopted at Laos, and founded on the average of nine of the dates quoted by Padmasarpo, who himself however rejects them .....	835

The majority of these quotations occur in fixing the period of the existence of a Buddha about 1000 years anterior to the Christian era. It is not, however, believed that any chronological era is founded upon this period: and if derived from book authorities, or tradition, the same would have travelled wherever the religion spread.

There is an equally extensive and consistent series bearing testimony to the existence of a Second Buddha in the sixth century before Christ; indeed most of the eras noted are evidently identical in origin and concurrent in date to the present time.

The Burmese epoch of Gotama's death, as given by Crawford from a native chronological table .....	B.C. 544 <sup>1</sup>
The Singhalese epoch of Buddha's death, and commencement of their era, on the landing of Vijaya, according to Turnour ('Ceylon Almanac' for 1834) .....	543
The Siamese epoch, ('Oriental Magazine,' 1826) .....	544
(The religion of Buddha was introduced in Siam in 529 A.C., according to Pinlayson.)	
The nirvāṇa of Śākya, according to the Rāj-gurū of Assam, occurred in the 18th year of Ajāta Śatru, and 196 <sup>2</sup> years before Chandragupta, the contemporary of Alexander, which may agree thus, 348 + 196 = .....	544

This date may further be reconciled with the other three dates quoted by Wilson in conjunction with them, namely,<sup>3</sup>

The Singhalese .....	A.C. 619
The Peguan .....	628
And the Chinese cited by Klaproth .....	638

by referring these latter periods to the birth, and to the ministry or commencement of the reign of Śākya; for by the Burmese calendar the first of these events happened in the year 628 A.C., and the latter 608-9. There is a constant difference of 10 years throughout the early series of the latter chronicle, which also places the nirvāṇa of Gotama in the 8th year of Ajātaśatru (*Ajāta-satru*), instead of the 18th, as above given: by adding, then, a correction of ten years, from whatever cause it may have originated, the Burmese dates will correspond exactly with those of Pegu and Ceylon; and they are thus brought to the confirmation of the unity of origin of the eras of all the countries which received their religion from Ceylon, or through the latter from central India.<sup>4</sup>

## JAIN ERA.

The Jains in some parts of India are stated to follow the era of their last Jina, Mahāvīra, whom they make to be the proceptor of

<sup>1</sup> The 'Oriental Magazine' makes this date 546, but the authority in the text is most to be relied on. According to the invariable rule of Eastern chronologists the year is not numbered until after its completion. Thus an inscription or document is always dated 'so many years being expired after the death of Gotama;' and thus the year 1 of the Burmese sacred era corresponds with the second current year or 543 A.C. while the epoch, or nirvāṇa of Śākya happened in 544.

<sup>2</sup> 162 years by the Burmese table in Crawford.

<sup>3</sup> [The proof of this sheet has been submitted to Prof. Wilson, who intimates to me that there are no new data of sufficiently positive bearing on this question to justify any alteration or emendation of Prinsep's original text. Burnouf seems to place the event in 543 A.C.—'Le Lotus de la bonne Loi,' p. 487.]

<sup>4</sup> The 'Journal Asiatique,' for November, 1833, contains a chronological table of the events of Buddha's life, derived entirely from Chinese and Japanese authorities, which makes it very evident that the Fo or Buddha of 1027 A.C. is the same identical personage as the one who died 544 A.C. As far as real chronology is concerned the recent date is alone in use; but the more ancient date seems to be supported by some passages in the Sanskrit original text.

Gotama, and place a few years anterior to him, in the year 569 B.C., and 512 before Vikramāditya. None of the Jain inscriptions found in South Bihār or elsewhere, however, shew any trace of an exclusive chronology, while they invariably bear the common Samvat date of Vikramāditya. One inscription on a brass image found on digging a tank at Baghampur, is dated 'after Pāra 925,'<sup>1</sup> which Dr. B. Hamilton interprets 'after Pārywanātha, the twenty-third teacher of the Jain religion, and consequently somewhat anterior to Mahāvira, who was the twenty-fourth;' but nothing positive can be asserted of these vague epochs.

#### BURMESE ERAS.

Other eras prevail in the Burmese country, which are more generally employed for the business of life, while the sacred era is kept up in ecclesiastical documents. The Prame epoch was established by king Samandri, and its first year corresponds with 623 of the sacred epoch, or 79 A.D. It seems to be the same as the Śāka era of Śālikāhana. The present Vulgar epoch used throughout Ava was established by Pappa-chan-ra-han; the first year agreeing with 639 A.D. or 1183 B. sacred era. The division of months accords with the luni-solar system of the Hindūs in every respect, the year beginning as usual with the new moon of the solar month Chaitra. To reduce the Burmese vulgar year into the Christian, add 638. For the Prame era the number 78 must be used for the like purpose. They have also another sacred era, called the Grand Epoch, said to have been established by An-ja-na the grandfather of Gotama: the first year corresponds with 691 A.C.

#### NEWAR ERA OF NIPAL.

Besides the Śāka and Samvat eras introduced by the Gurkha dynasty into Nipāl, there is still in use among this people a former era, called the Newār, from the name of the ancient dominant, or aboriginal, tribe of the valley. Dr. Branley informs us that the origin of this era is not known, though many attempt to account for it by fabulous stories. The Newār year commences in the month of October, the year 951 terminating in 1831 A.D. Its epoch concurs therefore with the month of October, 870 A.D., which number must be retrenched from a Newār date to have the corresponding Christian year.

[In concluding Prinsep's notices of Local Eras, I extract from the work of Albiruf some further details in reference to Indian cycles, to

<sup>1</sup> 'Trans. Roy. As. Soc.', vol. i. 327.



complete the quotations previously given in reference to the epoch of the Guptas, inserted at p. 268, vol. I.]

<sup>1</sup> Toutes ces ères présentent des nombres considérables remontant à une antiquité reculée, et leurs années dépassent les nombres cent mille et au delà. Ces nombres ont embarrassé les astronomes dans leurs calculs, et, à plus forte raison, le commun des hommes. Nous allons donner une idée exacte de ces ères, et nous rapporterons nos calculs à l'année des Indiens, dont la plus grande partie correspond à l'an 400 de l'ère de Yisderdjed. Cette époque s'exprime par un nombre rond et n'est embarrassée ni de dizaines ni d'unités. Cet avantage lui est particulier et la distingue de toutes les autres années.

<sup>2</sup> De plus, elle a été rendue à jamais célèbre par la chute du plus fort boulevard de l'Islamisme et la mort de l'illustre sultan Mahmoud, lion du monde et le phénomène du temps : Dieu lui fasse miséricorde ! En effet, Mahmoud expira moins d'un an avant cette époque.

<sup>3</sup> Le *saahâ* des Indiens précède le nouveau (premier jour de l'année) des Perses de douze jours, et il fut postérieur de dix mois Persans complets à la nouvelle de la mort du sultan.

<sup>4</sup> Toutes ces ères présentent des nombres considérables et remontent à une époque reculée ; voilà pourquoi on a voulu à en faire usage. On emploie ordinairement les ères de Sri-Harscha, de Vikramaditya, de Saka, de Ballaba et des Guptas.

<sup>5</sup> Les Indiens croient que Sri-Harscha faisait fouiller la terre et cherchait ce qui pouvait se trouver dans le sol, en fait d'anciennes trésors et de richesses enfouies ; il faisait enlever ces richesses et pouvait, par ce moyen, s'abstenir de fouler ses sujets. Son ère est mise en usage à Mahourah et dans la province de Canogi. J'ai entendu dire à un homme du pays que, de cette ère à celle de Vikramaditya, on comptait quatre cents ans ; mais j'ai vu, dans l'almanach de Cachemire, cette ère reculée après celle de Vikramaditya de 664 ans. Il m'est donc venu des doutes que je n'ai pas trouvé moyen de résoudre.

<sup>6</sup> L'ère de Vikramaditya est employée dans les provinces méridionales et occidentales de l'Inde. On pose 342, qu'on multiplie par 3, ce qui fait 1026 ; on ajoute au produit ce qui s'est écoulé du *schadabda*, mot par lequel on désigne le *samvatsara* sexagésimal. Voilà ce qu'on entend par l'ère de Vikramaditya. J'ai vu le mot *schadabda* cité dans le livre du *Sorassas*, composé par Mahadeva Djandaryas. Le procédé qu'on emploie d'abord est incommode. Si on commençait par poser le nombre 1026 au lieu de marquer sans aucun motif 342, l'opération serait plus simple : car admettons le résultat, maintenant qu'on en est au premier *samvatsara*, comment fera-t-on lorsque les *samvatsaras*, se multiplieront.

<sup>7</sup> L'ère de Saka, nommée par les Indiens *Sarakâla*, est postérieure à celle de Vikramaditya de 135 ans. Saka est le nom d'un prince qui a régné sur les contrées situées entre l'Indus et la mer. Sa résidence était placée au centre de l'empire, dans la contrée nommée *Aryavartta*. Les Indiens le font naître dans une classe autre que celle des *Sakya* ; quelques-uns prétendent qu'il était Soudra et originaire de la ville de Manasura. Il y en a même qui disent qu'il n'était pas de la race indienne, et qu'il tirait son origine de régions occidentales. Les peuples eurent beaucoup à souffrir de son despotisme, jusqu'à ce qu'il leur vint du secours de l'Orient. Vikramaditya marcha contre lui, mit son armée en déroute et le tua sur le territoire de Korour,

<sup>8</sup> Il me semble résulter de l'ensemble du passage, que le cycle sexagésimal, non-seulement était propre à une certaine partie de l'Inde, mais qu'il était d'une institution récente. Le calcul présenté par Albyronny me fait croire qu'il commença seulement l'an 959 de notre ère. — *Résumé.*



situé entre Moultan et le château de Loony. Cette époque devint célèbre, à cause de la joie que les peuples ressentirent de la mort de Saca, et on la choisit pour ère, principalement chez les astronomes. D'un autre côté, Vikramaditya reçut le titre de *Sri*, à cause de l'honneur qu'il s'était acquis. Du reste, l'intervalle qui s'est écoulé entre l'ère de Vikramaditya et la mort de Saca, prouve que le vainqueur, n'était pas le célèbre Vikramaditya, mais un autre prince du même nom. [Here follows the passage quoted in original Arabic, and in the French and English versions, pp. 269, 271, vol. i.; and the consecutive extract is complete at p. 269, with the exception of the following sentence, which comes in after '241 de l'ère de Saca.'] L'ère des astronomes commence l'an 587 de l'ère de Saca. C'est à cette ère qu'ont été rapportées les tables Kanda Khilwa, de Brahmagupta. Cet ouvrage porte chez nous le titre de *Arrest*. [To this succeeds the sentence 'D'après cela,' etc.; and Albiruni, after stating his further difficulties in the reconciliation of discrepancies, and the local divergencies of the commencement of the year, concludes with the passage given in *extenso* at the foot of p. 269.]

#### IV.—ERAS DERIVED FROM THE HJIRA.

##### FASLI OR HARVEST YEARS.

We have alluded in the foregoing pages to one or two eras following the solar and luni-solar systems, which were nevertheless derived from the Muhammadan year. They are 1, the Bengali san; 2, the Vilayati (vulgo, Vilaity) or Umly year of Orissa; 3, the Fasli (vulgo, Fudly) year of the Upper Provinces; 4, the Fasli year of the Peninsula. The circumstances connected with all of these have hitherto been enveloped in some obscurity. Warren was unacquainted with the first three, except by imperfect information obtained from Calcutta. He might, however, have discovered at once their character, had he known the custom followed in this presidency of inserting the concurrent dates of all these eras at the head of every regulation enacted by Government.

The Persian almanac of the Sadr Diwani 'Adalat, from the year 1764, inclusive, has been translated by Mr. Reid, the Registrar of that court, for the use of civil officers in reducing the dates of native documents. These tables have proved very useful in comparing and proving the scales introduced into the present work, for facilitating the same operation.

Harington's Analysis of the Land Revenue Regulations, contains in a foot note (p. 176) the best explanation of the Fasli or 'harvest' years, tracing their origin to the year of Akbar's accession to the throne, or the 2nd Rabi-ul-sini, A.H. 963 (14th February, 1556): 'A solar year for financial and other civil transactions was then engrafted upon the current lunar year of the Hijra, or subsequently adjusted to the first year of Akbar's reign.' It has been by some supposed that the Bengali san was established by Hussain Shah, one of the kings of Bengal, but the following extract from a Persian manuscript, in pos-  
 session of the

sion of a native gentleman at Benáres, for which we are indebted to the kind inquiries of Capt. Thoresby, Secretary of the Benáres Sanskrit College, sets the matter in a very clear light, and entirely confirms Mr. Harington's statements:—

'From the time of Amir Timúr, until the reign of Jalál-ud-din Muhammad Akbar, there were three eras in use, viz., the Híjra, the Turki, and the Jalálí. The Turki era commences with the creation of the world, and is computed in cycles of twelve solar years each. In the month Muharram of A.H. 1138, five hundred and sixty-five cycles had elapsed, and the fourth year of the following cycle was in progress. Each year begins with the new moon of the month Jéth of the Hindú calendar, and the months are lunar. At the end of two or three years, as the case may be, an additional month is introduced to balance the computations by solar years and lunar months.

'The Jalálí period is dated from the 6th of the month Sháhán in the year 468 Híjra, under the reign of Jalál-ud-din Toghtak Sháh, Ibn-i Alp Arslan Saljúki. The year begins with the Naurus, or the day that the sun enters the zodiacal sign Aries. There are thirty days allotted to each month, and five supplemental days are added to the twelfth month, to which at the expiration of every fourth year a sixth day is superadded.

'As the annual method of computation in the Turki era accorded with that observed by the Hindus in reckoning the years of the Samvat, it was generally used in the preparation of records and accounts, etc., but after the Emperor Akbar had extended his dominions by the conquest of Bengal, and a portion of the Dakhan, there were several modes of computing time prevalent in different parts of the empire: as the Samvat, with its lunar months and solar years; the Bengálí era, in which the year began with the arrival of the sun at the vernal equinoctial point, and the months were regulated by his passage through the twelve signs of the zodiac; and the Dakhaní era, which comprehended lunar months, and a lunar year beginning on the 12th of the light half of the month Bhádran. These differences occasioned a good deal of perplexity to the accountants and other public officers: at length some of them drew the attention of the Emperor to the subject, who, after deliberating with his ministers, desired that the three foregoing eras should be made to agree with the year of the Híjra 964, (983) and that appropriate names should be given to them. Accordingly, it was decided that the Samvat in Upper Hindústán should be named Fushí, and should commence with the month Ayswa (Kuswar), in which the collection of land-tax for the following seasons is first made. The era introduced into Bengal was denominated *Sar-i-Bangala*, and the year was continued there, in the period of its commencement, on the sun entering Aries, as heretofore. This was likewise the case in the Dakhan, where the new era was called *Vikránt*, because it was received from the Vikránt of Hindústán, and the annual revolution continued to be dated on the 12th Bhádran. These three eras therefore owe their origin to the fiat of the Emperor Akbar, and they are formed upon the basis of the Muhammadan epoch, but the annual revolutions accord with those of the eras which they superseded.'

Thus the object of Akbar was merely to equalize the name or number of the year all over his vast empire, without interfering with the modes of subdivision practised in different localities: and this explanation will materially simplify the understanding of the subject of the four harvest years.

The Bengálí san, the Viláyatí san, and the Tamil Faslí year, may be always considered identical in character with the Śāka solar year, while the Faslí of the western provinces may in like manner be classed with the luni-solar Samvat there current.

The reason of a year's variation in the denomination of the Bengálí san will at once be seen on comparing the commencement of each.

The Híjra year 963 began on the 26th November, 1555, *n.a.*

The concurrent Faslí year, 963, began on the 1st of the lunar month *Āsan* (*Āswina*), which fell on the 10th September, 1555.

Th Viláyatí year 963, on the 1st of the solar month *Āsan*, which occurred on the 8th September, 1555.

But the Bengálí san 963, began on the 1st Baisákh falling within the same Híjra year, which was necessarily that of the 11th April, 1556.

The number 592 must be added to convert the two first eras into Christian account, if less than four of their months have transpired, and 593 years, if more; also 593 for the first nine months of the Bengálí san, and 594 for the rest.

#### FASLÍ ERA OF THE DAKHAN.

The Faslí year of the Peninsula, however, differs two years from the preceding, being apparently in advance of them. This can only be caused by its having branched off from the Híjra as a parent stock at a later period.

The year 1240 of this Faslí begins in July, 1831, or in the second month of 1247 Híjra. The difference is seven years, which converted into days, and divided by 11, the constant acceleration of the lunar year per annum, gives a period of about 230 years back for the epoch sought. But as the Faslí only drops behind, one year in 33, a latitude to that extent may be allowed in fixing the epoch of its foundation. In fact, we learn from Grant Duff's 'History of the Marhattas,' that this Dakhaní era owes its origin to the Emperor Sháh Jahán, who, after bringing his wars in Maháráshtra to a close in 1636, endeavoured to settle the country, and introduce the revenue system of Tudor Mul, the celebrated minister of the Emperor Akbar. Along with the survey and assessment naturally came the 'revenue year,' which, commencing as usual with the current Híjra year of the time, has now diverged from it seven years, as above-mentioned.

The constant for converting this era into Christian years is + 590. The year is, or ought to be, sidereal, but the Madras Government has now fixed its commencement to the 12th July. Its subdivisions are however, little attended to, the sole purpose of its application being in revenue matters.

## THE FARĪKH ILĀHĪ, OR ERA OF AKBAR.

This era was established by the Emperor Akbar, in the thirtieth year of his reign, (A.H. 992, A.D. 1584,) many years after his introduction of the Faḡlī era, as Abū'l-Faḡl says, 'in order to remove the perplexity that a variety of dates unavoidably occasions. He disliked the word Hījra, 'flight,' but was at first apprehensive of offending ignorant men, who superstitiously imagined that this era and the Muhammadan faith were inseparable. Amīr Faṭṭeh Ul-lāh Shīrāzī corrected the calendar from the tables of Ulugh Beg, making this era to begin with his majesty's reign. The days and months are both natural solar, without any intercalations. The names of the months and days correspond with the ancient Persian (see page 143). The months have from 29 to 30 days each. There are no weeks, the whole 30 days being distinguished by different names; and in those months which have 32 days, the two last are named *rus a shak* (day and night), and to distinguish one from the other are called first and second.'

The epoch of the Ilāhī era consequently falls on Friday the 5th Rabi-ul-sani, A.H. 963, corresponding with the 19th February, 1556, A.D. which number must be added to bring its dates into Christian account. It is used on inscriptions, coins, and records of Jahāngīr's and the following reigns, but generally coupled with the Hījra date.

## THE SHAHĪR (YULGĪ, SHUHOOR) OR SOOR ERA OF MAHARASHTRA.

There is another era of Muhammadan origin still employed by the Marāṭhas of the west, entitled the Shahār or Soor-*san*, a corruption of the Arabic word *shahr*, (plural of *shahr*, 'month,') and literally meaning the 'year of months.' An account is given of this era in Capt. Jervis's 'Report on the weights and measures of the southern Konkan.' That officer affirms on some Hindī authority that it was introduced on Thursday, the 6th June, 1342, A.D., in the Hījra year 743, while others place it a year sooner: but the computation of its agreement with the Hījra year, says Capt. Jervis (in the same manner as was followed in ascertaining the epoch of the Faḡlī year), shews it to have begun when the 745th Hījra (A.D. 1344) corresponded with the 745th Shahār *san*.<sup>1</sup> It was probably adopted on the establishment of one of the Muhammadan kingdoms in the Dakhan under the reign of Tughlak Shāh.

<sup>1</sup> This correspondence would continue for several years before and after, so that the Hindī account may probably be correct.

The years of this era are denominated after the corresponding Arabic numerals.

The following examples will be sufficient to explain the system; the names are, however, corrupted in pronunciation by the Maráthas:

1 <i>Ahadi</i> ,	10 <i>Ashar</i> ,	100 <i>Māyat</i> or <i>Māya</i> .
2 <i>Isai</i> ,	20 <i>Iskria</i> ,	122 <i>Isai-ashria māyat</i> .
3 <i>Sahas</i> ,	30 <i>Sahisin</i> ,	200 <i>Mātin</i> .
4 <i>Arba</i> ,	40 <i>Arbain</i> ,	300 <i>Sala māyat</i> .
5 <i>Khansa</i> ,	50 <i>Khansin</i> ,	450 <i>Khansin-arba māyat</i> .
6 <i>Sita</i> ,	60 <i>Sitain</i> ,	1000 <i>Alf</i> .
7 <i>Saba</i> ,	70 <i>Saba-in</i> ,	1100 <i>Māyat-o-alf</i> .
8 <i>Somini</i> ,	80 <i>Somisin</i> ,	1200 <i>Sabasin māyat-o-alf</i> .
9 <i>Yas</i> ,	90 <i>Yas-in</i> ,	1313 <i>Sala-ashar sala-māyat-o-alf</i> (A.D. 1834).

The correspondence with other eras may be seen from the following brief rule for their mutual reduction:

To reduce Shahár years into	$\left\{ \begin{array}{l} \text{Christian} \\ \text{Sáka} \\ \text{Samvat} \\ \text{Fajri} \end{array} \right\} \text{ years, add } \left\{ \begin{array}{l} 309 \\ 521 \\ 656 \\ 2 \end{array} \right\} \text{ years respectively.}$
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If the given date fall after the sixth month of the Shahár year, it will occur in the next ensuing Christian year; and after nine months, in the next Sáka or Samvat year; because the Shahár year begins in June, at the sun's entrance into the lunar mansion *Mriga* (*Mrigashirsha*.) It is not stated whether its subdivisions follow the Hindú or Arabic system, but the former may be taken for granted.

#### JALÚS YEARS.

There is still another system of recording time to which some allusion is requisite under this head, as it depends, like the foregoing, upon the Hijra reckoning. During the dynasty of the Moghal Emperors, the year of the reigning monarch was usually inscribed, as is the case in most countries, upon all documents of a public nature. It was also particularly noted on the gold and silver coinage, where indeed it continues to be inserted under the Company's rule, although the date has long remained unchanged. The Hijra date was frequently added.

The *jalús-san* (*san-i jalús*) necessarily follows the Hijra reckoning, and the same tables will answer for the solution of them when the accession day of each sovereign is known. Those of the Moghal Emperors have accordingly been inserted among the festivals of the Muhammadan lunar calendaric scale, where an explanation will be given of their application. A list of the sovereigns of Dillí, in chronological succession, will also be found among the tables of dynasties.

It seems that the '*jalús-san*' has been constituted a fixed era in

the Southern Konkan, commencing with the year of Śālivāhana 1578, (A.D. 1656), and running on henceforward in the ordinary solar manner contrary to all precedent in other parts of India.<sup>1</sup> This epoch, derived from Capt. Jervis' 'Report,' is anterior by two years to the coronation of Aurangzeb; but it corresponds precisely with the accession of Sultān 'Alī 'Adī Shāh II. to the throne of Rājāpur; from which circumstance it doubtless drew its origin, although from subsequent disturbances, its correction was lost sight of.

In general it should be borne in mind that the duration of a Muhammadan monarch's reign, as well as of his life, is reckoned by lunar years; and that both consequently require correction when compared with other dates.

## RĀJ-ABHISHEK ERĀ OF THE MARĀTHAS.

Only a few years subsequent to the establishment of the Jalūs era last mentioned, another of the same nature was set up by the Marāthas, or at least it has since come into use, founded upon the rise of their power under the famous Śivaji. We have the authority of Grant Duff for fixing the date of Śivaji's ascending the throne, on the death of his father Shihaji, in the year A.D. 1664, when he first assumed the title of Rājā, and struck money in his own name.

To convert the Rāj-abhishek (meaning 'ointment of the king') into the Christian era, 1664 must be added. The division of months probably accords with the Śākā system.

## RECAPITULATION.

The whole of the eras mentioned in the foregoing imperfect account are, for the convenience of reference, collected below in a tabular form, with the equation for their conversion into the ordinary reckoning of Europe. It has been deemed preferable to insert the year of the Christian era, corresponding with the *first nominal year* of each of the Indian eras, which will here and there produce an apparent variation from the epochs or initial dates given in the foregoing sketch. (See note, p. 165.)

<sup>1</sup> Jervis's 'Report,' p. 29.

TABULAR VIEW OF ERAS USED IN INDIA, WITH THE EQUATION FOR CONVERTING THEM INTO CHRISTIAN DATES.

DESIGNATION.	COMMENCEMENT.	EQUATION.
The Kali-yuga (vulgar, Kal-jog) commences Friday, 18th Feb.	3102 B.C.	(before Christ) 3102—K=C
The first year being reckoned as 0, the year 1 accords with	3101 A.C.	(after Christ) K—3101=C
Era of Buddha's birth, by Chinese account.....	1027 A.C.	not used.
Ditto, his <i>sarvapa</i> , in India, Ceylon, Ava, Siam, &c. 1st year =	543 A.C.	543—B=C
Jain era of Mahāvira.....	1st year 629 A.C.	not used.
Samvat (Sambut) of Vikramāditya, year 1 = 3 March, 26 A.C.		— 56½
Saka (Shuk) of Sālivāhana = equivalent.....	78 A.C.	+ 78½
Parasurāma cycle of 1000 years (1st year of 4th cycle = Sept.	823 A.C.	+ 824½
Grahaparivṛtthi ditto, of 96 years (1st year of 21st cycle) =	1777 A.C.	+ 1776
Vṛishapati (Jupiter's) cycle of 60 years (established in 966 A.C.)		
1st year of 84th cycle ("Śūrya-Siddhānta") = 1790 A.C.		+ 1795
11 11 83rd cycle (Talinga account).....	1807 A.C.	+ 1806
11 11 14th cycle (Tibet account).....	1807 A.C.	+ 1806
11 11 70th cycle (Chinese account).....	1804 A.C.	+ 1803
Turkish or Ighari cycle of 12 years coincides with Tibetan and		
Talinga Jovian cycle, in its initial year.....		divided
Ralebbi Samvat of Sonmāl.....	1st year = March 818 A.C.	+ 317½
Siva-Sāha Samvat of Gujarat.....	1113 A.C.	+ 1112
Burmese era of Prome.....	70 A.C.	+ 78½
11 Vulgar epoch.....	630 A.C.	+ 638
11 Sacred era (see Buddha).....	543 A.C.	— 544
11 Grand epoch.....	601 A.C.	— 592
Java era, Aji Saka.....	74 A.C.	+ 73
11 Bali era.....	81 A.C.	+ 80
Nipāl, Newār era.....	870 A.C.	+ 869
Tibet, <i>mu-tsa-gyu-tak</i> , 493-year era,.....	622 A.C.	+ 621
Hijra, lunar year.....	begins July 16, 622 A.C.	see tables
Era of Yazdijerd, Persian.....	June 16, 632 A.C.	+ 631½
Jalālī era of Malīk-shāh.....	March, 1079 A.C.	+ 1078½
Tūrkh-i Ilāhī of the Emperor Akbar.....	March, 1556 A.C.	
Fuḡlī, revenue year of Upper India (established in 1556 A.C.)		+ 592½
11 11 of South India.....	1638 A.C.	+ 590
Vilāyati 11 of Orissa.....	1556 A.C.	+ 592½
Bengālī-san 11 of Bengal.....	1556 A.C.	+ 593½
Shahār-san of the Marāṭhas.....	(introduced in 1344 A.C.)	+ 599
Jalān-san of Bījapūr.....	("Adl Shāh II. 1666 A.C.)	+ 1656
Rāj-abhishek of the Marāṭhas.....	(Shivaji's reign 1664 A.C.)	+ 1664



## DIRECTIONS FOR USING THE CHRONOLOGICAL TABLES.

Most persons consulting the following tables will wish to be spared the perusal of the description of the origin and formation of the several eras comprised in them, and will be desirous only of obtaining their object as directly as possible, namely, the conversion of a date expressed in either the Christian, HĪjra, Samvat, Śāka, Kali-yug, Vrihaspati, Parasurāma, or Grahaparivṛthi system, into the corresponding day of any other of the same series. The present rules will be confined to this object. They are partly repeated, also, with examples, on the pages of the several yearly scales, for the convenience of more immediate reference.

RULES FOR ANY DAY OF TIME FALLING WITHIN THE RANGE OF THE GENERAL TABLES XII. AND XIV., NAMELY, FROM A.D. 622 TO A.D. 1900 FOR THE HĪJRA, AND FROM A.D. 1600 TO A.D. 1900, FOR THE HINDŪ ERAS.

## HĪJRA KALENDAR.

1. To find the Christian date corresponding with any Muhammadan date of the HĪjra era,—say the 17th of Rajab 1201 A.H.

Take the initial day of the year 1201 from Table XIII., which will be found to be 3 (or Tuesday) the 24th October, 1786 A.D. Then set the first day of Muharram on the edge-scale of Table V. to the 24th October on the proper column of the Christian era, Table XII. Opposite to the 17th Rajab will be found to stand the 5th May (1787), which is the day required.

2. To find the Muhammadan day agreeing with a given Christian day,—say the 17th March, 1804 (a leap-year).

Find from Table XIII. what year of the HĪjra commences next before March, 1804, namely, 1218 A.H., beginning on Saturday, the 23rd April, 1803. Set Scale V. to this date, and read off opposite to the 17th March, the 4th of Zilhajeh; but because 1804 is a leap-year, and the day falls after the end of February, one day must be added to the scale, and the reading will then be the 5th Zilhajeh, which is the day sought. Should the day of the week be also required, set the 1st Muharram to Saturday on the hebdomadal scale in Table XII. and read off 5th Zilhajeh, Saturday.

3. To find the Christian year corresponding with the jalās of any of the Mughal Emperors of Dillī,—for instance, the 19th year of the reign of Shāh 'Ālam?

In the column of Festivals in the HĪjra kalendar, page 162, it will be seen that Shāh 'Ālam came to the throne on the 1st of Jumādī I, A.H. 1173. Adding to this 19, as above, the general HĪjra Table shows that A.D. 1192 commenced on the 30th Jan. 1778:—the 19th jalās

therefore (by the scale) will be seen to commence on the 29th May of the same year.

4. To convert a Hijra date into any of the Hindú eras corresponding to the given Hindú date.

In these cases the intervention of the Christian scale is required, because the initial days of the Muhammadan years are given only in the latter system. When once the English day is found, the rules already prescribed will answer for determining the remainder of the problem.

#### HINDÚ SOLAR OR SIDEREAL KALENDAR.

5. To convert a date in the Kali-yug, Sika, or Bengálí-san eras, into the corresponding Christian date,—for example, the 1st of Jêth s.s. 1199 = *x.v.* 4893 = *Sa'k.* 1714.

By Table XIV. the 1st Baishakh, *s.v.* 4893, of the Hindú solar era coincided with Tuesday, the 10th April *a.d.* 1792. Therefore setting the index of the Hindú solar scale, Table X., to that day, on the proper column of Table XII.:—the 11th of May will be the resulting date.

(From the astronomical formation of the Hindú months, an error of a day in the *civil* reckoning will sometimes occur, which the kalendar X. is unable to correct, without a computation of the elements of the beginning of the particular Hindú month by the rule hereafter laid down, page 178).

6. The converse of the above proposition hardly requires a separate explanation.

Example: Required the Hindú solar day corresponding to the 20th December, 1813?

The 20th December, 1813, must fall in the Kali-yug year, 4914 (*s.s.* 1220), commencing, by Table XIV., on Sunday, 11th April, 1813. Setting, therefore, the index of the Hindú solar year to the 11th April, the 20th December will be found to accord with the 7th or 8th Pausa, 4914 *x.v.* (The Viláyatí or Dákhani reckoning gives the latter, while the Bengálí gives the former day.<sup>1</sup>)

#### FESTIVALS.

The Hindú Solar Kalendar contains but three festivals of any importance, namely, *Charak-pôja*, on the last day of the year (or entrance of the Sun into the first sign *mesā*, of the Sidereal Zodiac), called also the *Satva-sankrānta*:—the first day of the Viláyatí year of

<sup>1</sup> It should be remarked that Warren's '*Kāla Saṅkālita*' gives the beginning of the Hindú solar year invariably one day earlier than the reckoning followed in the tables of the *Sūtr Dīpānti*. This arises from his using the Tamil year of the '*Ārya Siddhānta*,' while the '*Sūrya Siddhānta*' is used in Bengal. We have not ventured to alter the tables, but the correction may be borne in mind.

Orissa and of the peninsula in general, viz., the autumnal equinox, or rather the Sun's entrance into Virgo:—and the *Makar-sankranti*, on the last day of Pausya, when the sun enters Capricornus. The Christian day on which these occur will be shown by the scale when the index is adjusted for the given year.

## LUNI-SOLAR CALENDAR.

7. To reduce a given date in the Samvat of Vikramāditya, or in the Faut of the Upper Provinces, to the corresponding approximate Christian day,—for instance, the 2nd Sôdî Bhâdon (sôdî Bhâdra) 1861, Samvat, or the 16th Bhâdon, 1211, Pahl.

By the general Table XIV., column 15, the Samvat year 1861, commenced on the *day after* the last conjunction, which fell on Sunday, 11th March, 1864.

Setting, therefore, the index of the luni-solar scale of Table VII. (or the new moon of the month Chaitra), to the 11th March, we find the 16th Bhâdon (Bhâdra) falls on the 7th August. But the year 1861, Samvat, is an *adhika*, 'lound,' or intercalary year; it is necessary, therefore, to find out what month is repeated, otherwise the denomination Bhâdon may be a month erroneous. (N.B. It is always one of the first five months or the last month of the lunar year that is repeated).

8. To ascertain what month will be repeated in the Hindû luni-solar year,—taking for example the year 1861.

Set the index of Table VII. (the new moon of Chaitra) to the date of the beginning of the luni-solar year in the solar calendar, taken from column 16 of the General Table XIV. namely, in the present instance, the 1st of the solar month Chaitra, which month (by column 14, of Table XIV, will contain 31 days.)

It will immediately be seen, that a second new moon will fall on the 31st of the same solar month Chaitra; the lunar month Chaitra therefore will be repeated, and the lunar month Bhâdon (Bhâdra) will fall a month later, coinciding with the ordinary month *A'san* (*A'swin*.)

Therefore, in reading off the date opposite to the 16th Bhâdon—(*A'san*.) the English date will come out the 6th September, A.D. 1864, which is now correct.

9. The converse of this proposition is equally simple, regard being paid to the character of the luni-solar year, and the month to be repeated (if any) being first ascertained by the rule just explained.

<sup>1</sup> The data for this example are taken from Warren; but strictly speaking the intercalation in this case should have belonged to the preceding year, since the definition of the commencement of the new year states that it begins with the *last* new moon antecedent to the first Baisakh of the solar calendar.

Example: Find the approximate luni-solar day for the first July, 1812.

By the General Table XIV. the Samvat year 1869 begins on the day following the 13th March, 1812; it is an Adhika or intercalary year, beginning on the 3rd of the solar month Chaitra, which contains 31 days.

Setting the luni-solar index accordingly to the 2nd of Chaitra on the solar kalendar, the scale informs us at a glance that two new moons will fall within the solar month Vaisākha; the lunar month of that name will consequently be repeated, and the denominations of the following months will be altered accordingly.

Now, set the luni-solar index to the 13th March, and read off opposite to the 1st July, the 6th (Sāwan) Asāra, 1869, which is the approximate date: (in reality it fell on the 7th, for no fixed scale can represent the variations of the lunar month correctly to a day in all cases.)

#### RULES FOR INTERCALATION.

It is not however necessary, within the limits of the General Table, to resort to the juxtaposition of the luni-solar and solar scales, to ascertain what month will be intercalated, since the initial letter of the month required is given in the 14th column of Tab. XIV.: thus AV signifies Adhika Vaisākha, or that the month Vaisākha will be repeated: the whole of the abbreviations which can occur, and the general order in which they do occur, are as follow:

AA	Adhika	Asāra	These intercalations happen respectively at the time the year begins on the	4th or 6th of Chaitra (sol. calendar.)
AV	"	Vaisākha		2nd or 3rd ditto
AR	"	Ṛādrā		9th or 10th ditto
AS	"	Śrāvastā		6th, 7th, or 8th ditto
AJ	"	Jyēsthā		4th, 5th, or 6th ditto
AC	"	Chaitra		0 or 1st ditto <sup>1</sup>
AS	"	Śrāvastā		6th, 7th, or 8th ditto.

In this table, the last column shows what commencing day of the Samvat year will cause particular months to be intercalated: when therefore, by the rule just given, this day has been expounded, the existence and position of an intercalation is also determined for the given year: thus, in the Samvat year 500, as the initial day falls on the 4th of Chaitra, there will be an intercalation of the month Jyēsthā.

Some ambiguity, however, will still remain as to the actual month to be repeated, since, if Vaisākha had 32 days in that year and Chaitra 31, new moons would have occurred on the 3rd and 32nd of Vaisākha, and consequently the latter month would have been the one repeated.

<sup>1</sup> If Chaitra be accounted the first month of the year: but if it be called the last month, then the intercalation of Chaitra occurs when the preceding luni-solar year begins on the 10th or 11th Chaitra solar kalendar. Both cases are met with in the tables, as though the matter were indifferent to the Hindū astronomers.

To overcome this unavoidable degree of uncertainty, the problem must be worked out systematically with the elements furnished by the tables of Solar and Lunar Abergana, but such an extreme measure will seldom or never be required in ordinary cases.

## LUNAR FESTIVALS.

The days on which the principal lunar festivals of the Hindûs occur being inserted in the kalendar in Table VII, will be solved in European dates by simple inspection when the scale is once adjusted. It is only necessary to bear in mind that in an intercalary year such feasts as occur in the double month will be confined to the *ag* or proper month; and as the *Adhika* or intercalary month falls always in the middle of the 60 days (see page 155), the festivals will either happen in the first or in the last fifteen days of this period. All the festivals subsequent to it will be shifted forward one lunation along with the names of the months.

## TO CONVERT SAMVAT INTO SAKA DATES.

For instance what is the Saka day for the 6th Asara, 1869, Samvat?

Set the initial day of the luni-solar scale to the date of the solar Chaitra, given in the General Table as before (the 3rd Chaitra, or rather the 2nd, because the same General Table says, that Chaitra has 31 days); then (because also it is an intercalary year) read off opposite to the 6th (Sawan) *Asârha* on the lunar scale,—the 19th *Asârha*, solar reckoning, which will be correct by the Dakhani account. The Bengali account is in all cases one day earlier. The Saka year corresponding to Samvat 1869 by the General Table is 1726.

The same process precisely must be followed to find the Samvat from the Saka date; only reversing the readings.

## CYCLES.

For the years of the several cycles of *Parasurâma*, *Grahavarivritthi*, and *Vrihaspati*, simple inspection of the table will be sufficient to find corresponding dates, as the subdivisions of these years are seldom required. The names of the cycle of Jupiter (*Vrihaspati*) for the numerals in column xi. will be found in Table IV., page 163.

NOTE.—It should be borne in mind, that the natives, in speaking or writing a date in simple years, always express the number of years *expired*, not the current year, as is the custom in Europe. When they mention the month, therefore, they mean the month of the following current year: but as the numerical denomination of the Hindû year remains unchanged throughout it, no thought need be taken of the distinction of *expired* years, unless where a calculation has to be made from an initial epoch. In common parlance they may be treated like

the current years of any other system, as being more consonant with our ideas, and less liable to cause mistakes in transferring dates to and fro.

# RULES FOR DATES TO WHICH THE TABLES DO NOT EXTEND.

There are two methods of solving Hindû dates anterior to the tables: 1st, by finding the time expired since the Kali-yug epoch (which commenced on Friday, the 16th February, of the year 3102 a.c.); or, 2nd, by starting from some more modern epoch, the correspondence of which has been previously established. The latter is the most convenient method, and a Table of such epochs (IX.), taken from the 'Kâlî Sankalita,' has been consequently inserted for the purpose of applying it in page 188: thus—

Let it be required to find the Christian date, Julian style, for the 15th Pausa, 622 Saka? (622 current.)

From Table IX. it appears that the Saka year 622 began on Saturday the 20th March, 700 a.d. Set the index of the Hindû solar year scale to that day, and read off the 15th Pausa = 6th December, 700.

But as the Hindû months may vary in length a day or two, this result (if requisite) may be verified by finding the day of the week of both kalendars: thus—

	n.	d.	r.
1. Extract from Table IX. the root of the epoch .....	(6)	05	50
Add from Table X. the collective duration to the 1st Pausa...	(1)	16	37
And 15 days to the 15th of the month.....	(15)	00	00
The sum, rejecting septuaginta, is.....(Monday)	(1)	24	27
2. By the Dominical letter Table XI. of p. 189, the year 700 a.d. will be found to have commenced on Friday; whence (by the scale of days in the second part of the same table) the 6th of December will fall on Monday, which day, agreeing with that just found, the first computation is proved to be correct to a day.			

Answer: Monday, the 6th December, 700 a.d.

Example 2. What is the Hindû solar date corresponding to the 12th June, 538 a.d.

The epoch for the expired year 3691, a.v., or Saka 422 (the nearest in occurrence to the year 538 a.d.) is ... (6) 21 49 on the 16th March.

Add from Table VIII. 30 years... (2) 45 48

“ “ 8 years... (3) 04 12

The year Kali-yug 3699 began ... (5) 10 58, or on Friday nearest the 16th March, 538.

Solve the Dominical day, by which Friday proves to be the 16th March.

Set the index of the Hindû solar scale according to the 16th March in the Christian kalendar, and read off, the 12th June = 23rd Asârha.

Now, by the Dominical letter, the 12th June falls on a Saturday;

And for the Hindû year we have as above... (5) 10 58

Add collective duration to the first of Asârha ... (6) 19 44

And the 23 days of Asârha..... (23)

Making the 23rd Asârha fall also on..... (6) 30 42 = Saturday; which

proves the operation to be correct, and the result to be, Saturday, the 23rd Ashvina year 460 Śaka.

Example 3. Expounded from the Kali-yug epoch. On what Christian day fell the 18th Māgha, 4903 K.V.?

The proximate Christian year is  $4903 - 3101 = \text{A.D.}, 1802$  current. Take the contracted Ahargana from Table VIII, viz.—

4000 years	=	(2) 01 32
900 "	=	(5) 53 51
3 "	=	(3) 45 34

(4) 40 58

Deduct constant, or Śadyoga<sup>1</sup>..... (2) 08 51

Year 4904 K.V. begins (astronomically), (2) 32 07, counting from Friday, or on Sunday; and as the fraction is more than 30 gharia,<sup>2</sup> the civil year will commence on the following day, or on Monday: this is called the *outs dies*, and must fall, according to the General Table, somewhere near the 12th April. By the Dominical Table, then, it will be found that Monday corresponded with the 12th April of that year.

The remainder of the operation may be performed as before, either by the scale, or by the collective roots of the months: by both the answer comes out—Sunday, 30th January, 1803.

#### SAMVAT AND PAKI DATES ANTERIOR TO THE TABLES.

Where the tables do not give the initial day of the luni-solar year, it may be found from the table of Lunar Ahargana in p. 186, by the following simple process:—

1. Find the number of years elapsed since the commencement of the Kali-yug.
2. Extract the number of days corresponding with the elapsed period of Hindū solar years above found, from Table VIII.
3. Extract also the number of days elapsed in the luni-solar period corresponding, from Table VI.

Subtract the latter from the former, and the result is the number of days by which the luni-solar anticipates the solar year: if the remainder, however, exceed one lunation, or 29d. 31g. 50p., that amount must be deducted from it; because it is thence evident that an intercalary month would have intervened; the rule for the luni-solar year being, that it shall commence from the last new moon preceding the solar year.

NOTE.—For a correspondence of the luni-solar with the European date, it will in all cases be necessary to expound the beginning of the Hindū solar year in the first instance.

Example: On what European day did the Samvat year 1660 commence?

$$1660 \text{ Samvat} = \begin{cases} 1660 - 57 = 1603 \text{ A.D. (page 172).} \\ 1660 + 3044 = 4704 \text{ Kali-yug (expired).} \end{cases}$$

<sup>1</sup> Because the moment of the conjunction of the planets at the Hindū epoch occurred so many days and hours after the *vars* of the weekly reckoning. See note in page 188.

<sup>2</sup> The civil year begins at sunrise: the astronomical at noon.



1st. The number of solar days elapsed to the end of the Kali-yug year 4704

	B.	A.	P.
will be 4000 .....	1461045	61	28
0 .....	255681	07	49
4 .....	1461	02	06
	1718177	11	25
Deduct <i>Sodhya</i> or constant.....	2	08	51

Days elapsed, or root of A.Y. 4704..... 1718175 02 34 (Tuesday).

2nd. The number of luni-solar days elapsed, by Table VI. will be 4000 .....	1461025	60	19
700 .....	255675	49	49
4 .....	1446	59	56

Days elapsed, or root of *Samvat* 1660..... 1718148 40 04

Deducting this from the above, the remainder 26 is the number of days by which the luni-solar year precedes the solar, the last conjunction of the sun and moon falling on the (30 — 26 =) 4th of Chaitra: one day must, however, in all cases be added to this result, as the luni-solar year begins on the day after the conjunction of the sun and moon.

The 1st *Bhisak*, solar year 4704 A.Y. occurs on Monday, the 7th of April, 1603 A.D., therefore deducting 25 days as above stated, the year 1600 *Samvat* began on Wednesday, the 12th-March, 1603 A.D.

Setting the luni-solar scale accordingly to that day, any intermediate day of the year may be found: having previously determined whether any and what month of the year will undergo repetition or expungement, by the rules laid down in page 178.

Example 2. What day of the *Samvat* era corresponds with the 1st January A.D. 1 a.d.?

The year A.D. 1 = Kali-yug 3102 = *Samvat* 58, but as those years begin in March-April, the 1st January will fall in the preceding years respectively, viz. A.Y. 3101, and *Sam.* 57.

For the initial day of the solar year we have, speak of 3101, by Table IX. = 14th March A.D. 0.<sup>1</sup>

The solar days expired, omitting fractions, will be.....	3000 = 1,095,776
	100 = 36,520
	1 = 365

1,132,661

The luni-solar days will be (Tab. VI.).....	3000 = 1,094,732
	100 = 36,500
	1 = 354

Two intercalary months...	= 59	1,132,645
---------------------------	------	-----------

The *Samvat* precedes the solar year by 22 days and consequently begins on the 20th February, A.D. 0., and by the formula in page 177, it will be a 'leap' year, repeating either the month *Bhadra* or *Śrāvana*.

Setting, therefore, the index of the luni-solar calendar scale to the 20th Feb. in the appropriate Christian scale, the first of January will be found to fall on the 5th of *Māgha* (*Phalguna*) or 'Samvat 57, *Māgha-badi panchami*.'

<sup>1</sup> Some chronologists make the year 0=1 A.D., and indeed this is the common mode of reckoning.

It is impossible, within the compass of the present practical rules, to furnish methods for correcting the approximate lunar days solved as above: for such a degree of accuracy, recourse must be had to Warren's, Jervis', or Bentley's tables; but as the lunar equations seldom exceed half a day in time, the moon's mean place will always be within one day of the truth.







TABLE VI.—*Abhyaya Chandramasa, or Luni-solar Periods, reckoned from the beginning of the Kali-yug, according to the Sarga Siddhanta, to find the root, or commencement of any Luni-solar Year.*

The days in this account are reckoned from Tuesday.

Year.	Luni-solar Periods.			Year.	Luni-solar Periods.			Year.	Luni-solar Periods.		
	a.	b.	c.		a.	b.	c.		a.	b.	c.
1	(4)	551	22 01	29	(0)	7291	92 13	300	(1)	100558	26 03
2	(1)	705	44 03	30	(3)	10065	30 23	400	(4)	140087	49 07
3	(0)	1002	37 04	40	(5)	14308	06 37	500	(1)	180117	00 21
4	(1)	1116	50 06	50	(2)	19215	54 11	600	(2)	219446	29 35
5	(2)	1301	21 07	60	(1)	24511	41 30	700	(5)	259075	49 49
6	(1)	1457	15 48	70	(3)	29543	27 31	800	(1)	302205	18 04
7	(3)	1539	37 00	80	(1)	35205	45 00	900	(3)	347791	58 27
8	(2)	1803	60 31	90	(2)	40807	22 40	1000	(2)	395231	18 40
9	(1)	2077	03 43	100	(1)	46409	48 54	2000	(5)	730498	09 15
10	(0)	2612	18 11	200	(0)	73029	08 35	4000	(5)	1461025	50 10

To find on what day of the solar month, *Chaitra*, the beginning of any Luni-solar year falls.

1. From table VIII. of *Sarga Abhyaya* page 188, extract the number of solar days elapsed for the period of the Kali-yug.

2. From the present table extract in a similar way the number of days elapsed in the same luni-solar period.

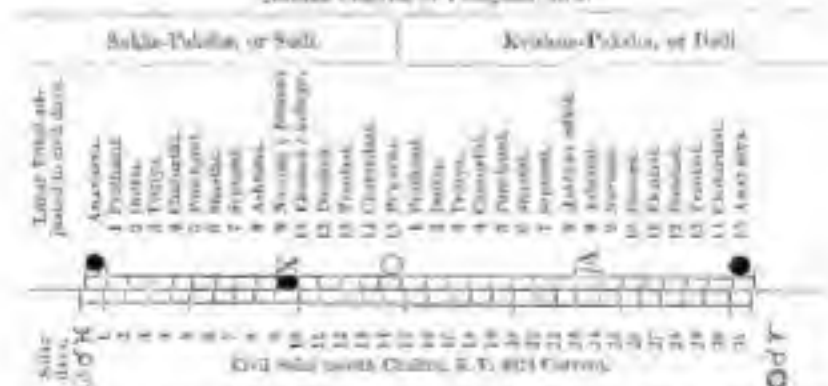
3. Subtract the latter from the former, and if the remainder exceed 29½ days, then subtract that amount so that the remainder shall always be less than 29½.

4. This remainder is then the number of days by which the lunar year precedes the solar, and, entered back from the 10th of the solar month, *Chaitra*, shows the date in that month with which it commences.

For an example, see p. 181.

SPECIES OF KALSHA MONTH FROM THE HINDU CALENDAR FOR THE EXTRAORDINARY MONTH QUARTER OF THE FUTURE LUNI-SOLAR YEAR OF THE KALI-YUG.

*Ashika Chaitra, or Phalguna-Sukla.*



This scale shows how the lunar civil day is reckoned with the solar civil day in which it ends: that when two *Gitika* end in one day, the second *tithi* is expanded: and when none end in a civil day, the *tithi* is reckoned twice; see p. 155.

# VII.—HINDU LUNAR-SOLAR YEAR.

## EXPLANATION.

The divisions on the outer edge express mean semi-lunations, as the mean time of the moon's conjunction and opposition, showing their connection with civil time in the adjoining column of days, wherein it will be seen that the first day of the month occurs on the day following the conjunction. The figures of this column follow the ordinary reckoning of the waxing and waning moon, *masi* and *badi*.

A. *maṣṣa-ṣaṁantaga*, or conjunction.

P. *purnima*, or full moon.

— *badi* or *ḍaśma-pakṣa*, dark half of the month.

— *masi* or *śukla-pakṣa*, bright ditto.

The inner column of figures gives the days of the lunar month as used in the *Padi* year, beginning always with the full moon.

The names of the months follow the same rule, beginning with the full moon; so that the Samvat year begins in the middle of Chaitra.

The names in capitals give the months as they occur in an ordinary year.

When a month is intercalated, it takes the name of the preceding month; and all the subsequent months, and festivals corresponding, are shifted forward one lunation. In such cases the second column of names must be used from the intercalated month onwards.

## RULES.

To find what month is to be inserted in an intercalary year.

Set the Index, or *manerava*, in the date in the solar month Chaitra of the next page on which it falls by the General Table, column xv. Then cast the eye down the table, and observe whether and in what solar month two new moons occur; that month will become *adhi* or *supplementary*.

If in any solar month (Padi or *Māsi*) no new moon occurs, that month will be *ḍaśma* or expunged from the Hindu solar year.

To find the Christian day of our Samvat or *Padi* date, set the Index to the corresponding initial date in March or April, and read off the result.

CONVERSION OF SOLAR DATE INTO HINDU DATE			FESTIVALS. (Those kept as holidays are marked *).		MONTHS.		LUNAR DATE
SOLAR DATE	SOLAR MONTH	SOLAR DAY	NAME OF FESTIVAL	NAME OF MONTH	NAME OF MONTH	NAME OF MONTH	LUNAR DATE
1	1	1	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	1
2	2	2	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	2
3	3	3	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	3
4	4	4	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	4
5	5	5	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	5
6	6	6	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	6
7	7	7	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	7
8	8	8	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	8
9	9	9	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	9
10	10	10	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	10
11	11	11	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	11
12	12	12	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	12
13	13	13	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	13
14	14	14	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	14
15	15	15	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	15
16	16	16	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	16
17	17	17	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	17
18	18	18	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	18
19	19	19	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	19
20	20	20	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	20
21	21	21	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	21
22	22	22	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	22
23	23	23	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	23
24	24	24	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	24
25	25	25	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	25
26	26	26	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	26
27	27	27	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	27
28	28	28	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	28
29	29	29	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	29
30	30	30	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	30
31	31	31	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	31
32	32	32	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	32
33	33	33	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	33
34	34	34	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	34
35	35	35	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	35
36	36	36	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	36
37	37	37	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	37
38	38	38	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	38
39	39	39	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	39
40	40	40	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	40
41	41	41	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	41
42	42	42	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	42
43	43	43	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	43
44	44	44	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	44
45	45	45	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	45
46	46	46	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	46
47	47	47	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	47
48	48	48	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	48
49	49	49	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	49
50	50	50	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	50
51	51	51	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	51
52	52	52	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	52
53	53	53	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	53
54	54	54	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	54
55	55	55	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	55
56	56	56	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	56
57	57	57	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	57
58	58	58	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	58
59	59	59	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	59
60	60	60	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	60
61	61	61	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	61
62	62	62	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	62
63	63	63	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	63
64	64	64	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	64
65	65	65	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	65
66	66	66	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	66
67	67	67	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	67
68	68	68	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	68
69	69	69	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	69
70	70	70	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	70
71	71	71	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	71
72	72	72	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	72
73	73	73	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	73
74	74	74	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	74
75	75	75	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	75
76	76	76	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	76
77	77	77	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	77
78	78	78	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	78
79	79	79	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	79
80	80	80	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	80
81	81	81	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	81
82	82	82	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	82
83	83	83	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	83
84	84	84	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	84
85	85	85	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	85
86	86	86	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	86
87	87	87	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	87
88	88	88	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	88
89	89	89	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	89
90	90	90	* <i>Chaitra</i> , year begins. <i>Maṣṣa-ṣaṁantaga</i> , 1. <i>Maṣṣa-ṣaṁantaga</i> , 2.	Chaitra	Chaitra	Chaitra	90

TABLE VIII.—*Solar Aburgans, or days, gharis, and paks elapsed from the beginning of the Kali-yug, for any period of years, [with the days of the week (within brackets) obtained, by dividing the collective days by 7.]*

Years.	Time corresponding.			Years.	Time corresponding.			Years.	Time corresponding.		
	d.	g.	p.		d.	g.	p.		d.	g.	p.
1	(1)	363	15 31	20	(4)	7205	10 20	300	(6)	109577	37 37
2	(2)	730	31 03	30	(2)	10957	45 40	400	(6)	146103	30 09
3	(3)	1095	46 34	40	(1)	14610	21 01	500	(6)	182629	22 42
4	(5)	1461	02 06	50	(6)	18262	56 10	600	(5)	219155	15 14
5	(6)	1826	17 38	60	(6)	21915	31 31	700	(6)	255681	07 40
6	(0)	2191	33 09	70	(4)	25568	06 47	800	(6)	292207	00 19
7	(1)	2556	48 41	80	(5)	29220	42 05	900	(5)	328732	52 51
8	(3)	2922	04 12	90	(1)	32873	17 17	1000	(5)	365258	45 23
9	(4)	3287	19 44	100	(0)	36525	32 32	2000	(4)	730517	30 47
10	(6)	3652	35 15	200	(0)	73051	45 04	4000	(2)	1461035	01 39

From any period found by this table, the constant quantity 2 days 8 gh., 51 pl. is to be subtracted, because the epoch of the Kali-yug occurred that time after the zero of the table. The days of the week are to be counted from Friday.

The solar *aburgans* are required at length to find the beginning of the luni-solar year, as explained in page 186, and in the text at page 184.

To find the beginning of the Solar year, however, it is sufficient to take out the figures between brackets (with the *gharis* and *paks*, where accuracy is required) for the odd years of the century; and add them to the epoch of the nearest century in the following table as explained in page 186.

TABLE IX.—*Epochs of Hindu Solar Years occurring in centuries before or after Christ, J. S.*

To be used for finding the beginning of any year, without reference to the commencement of the Kali-yug.

Remains year before Christ.	Years after Christ.	Epochs.	Date in March.	Epochs from year before Christ.	Epoch Kali- Yug.	Epoch year.	Epochs.	Date in March.
		d. g. p.					d. g. p.	
1000	2101	(1) 20 25	5	300	3401	222	(6) 37 50	16
900	2201	(1) 12 30	6	400	3501	322	(6) 29 34	17
800	2301	(1) 04 34	7	500	3601	422	(6) 21 40	18
700	2401	(0) 56 40	7	600	3701	522	(6) 13 45	19
600	2501	(0) 48 43	8	700	3801	622	(6) 05 50	20
500	2601	(0) 40 56	9	800	3901	722	(5) 57 55	20
400	2701	(0) 32 54	10	900	4001	822	(5) 50 00	21
300	2801	(0) 25 09	11	1000	4101	922	(5) 42 05	22
200	2901	(0) 17 03	12	1100	4201	1022	(5) 34 10	23
100	3001	(0) 09 18	13	1200	4301	1122	(5) 26 15	24
A.D. 0	3101	(0) 01 14	14	1300	4401	1222	(5) 18 20	25
100	3201	(5) 53 20	14	1400	4501	1322	(5) 10 25	26
200	3301	(5) 45 25	15	1500	4601	1422	(5) 02 30	27

From 1600 A.D. the General Table furnishes a continuation of the above epochs.

Note.—When this table is used, the days of the week are to be counted from Sunday.

Example.—On what day does the year 4250 K. Y. commence?

Nearest epoch 4201 gives	(5)	34	10
Add for 40 years, (table viii.)	(1)	21	01
9 ditto	(4)	19	44

Counting from Sunday, it begins on the (4) 14 55, fourth, or Thursday falling nearest to the 22d of March, A.D. 1149.



# X.—HINDU SOLAR OR SIDEREAL YEAR.

## VESTIGALS.

(The luni-solar year commences on the last new moon occurring in this month.)

### EXPLANATION.

The divisions on the watermarked edge of the paper show the correct astronomical lengths of the Hindu-solar months, agreeing with the quantities in the column headed *Collective Duration*.

The scale of days, gives the civil division of the months when the astronomical year commences at or near sunrise; it is liable to variation when otherwise; but the first and second three-monthly periods always contain 94 and 93 days respectively.

The names of the months in Bengali and Tamil, and their astronomical duration, are given in the column of months.

### NOTE.

To find the European date of any day in the *Kaliyug*, *Saka*, *Bengali sun*, or *Tamil year* (or vice versa).

Set the index, or 1st *Bysakh*, to the initial day of the Christian year extracted from the General Table, or found by means of the Table of Epochs in a opposite page; and read off the date required.

To resolve the Hindu solar date concurring with any day of the luni-solar year, *Sanyat* or *Fual*, set the index of the luni-solar scale (p. 187) to its expounded day in *Chaitra* and read off the day required, which will however be only an approximation, as the lengths of the lunar months vary in a trifling degree.

Year begins, on ☉'s entering the sidereal sign ♈ (or ☿) called *Amavasyant*.

First *amavasyant*. (Shakabhasa called *Shamvatsara*.)

Vikram year begins, 1.

Chaitra *amavasyant*.

Maker *amavasyant*.

COLLECTIVE DURATION.	MUSYUN. Year. Rem.	Days of week.				BENGALI.	TAMIL.	ASTRONOMICAL DURATION.
		S.	M.	T.	W.			
(1) 30	31	32				BYAKHA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
(2) 30	31	32				CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
(3) 42	38	44				CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
(2) 30	31	32				CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
(3) 125	24	34				CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
(2) 136	30	44				CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
(4) 140	34	44				CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
(3) 136	44	43				CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
(1) 306	18	37				CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
(2) 274	30	30				CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
(5) 303	10	46				CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
						CHAITRA.	Y	30
(5) 334	31	31				CHAITRA.	Y	30

CHAITRA 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510 520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 1000

TABLE XI.—To find the day of the week for any date from 5000 B.C. to 2700 A.D. First Part—for New Year's Day of any Year.

Centuries before Christ.								Centuries after Christ.							
1000	1700	1800	1900	2000	2100	2200	2300	1000	1700	1800	1900	2000	2100	2200	2300
4100	3400	2500	1600	700	0			1000	1700	1800	1900	2000	2100	2200	2300
4000	3300	2400	1500	600	0			900	1600	1700	1800	1900	2000	2100	2200
3900	3200	2300	1400	500	0			800	1500	1600	1700	1800	1900	2000	2100
3800	3100	2200	1300	400	0			700	1400	1500	1600	1700	1800	1900	2000
3700	3000	2100	1200	300	0			600	1300	1400	1500	1600	1700	1800	1900
3600	2900	2000	1100	200	0			500	1200	1300	1400	1500	1600	1700	1800
3500	2800	1900	1000	100	0			400	1100	1200	1300	1400	1500	1600	1700
3400	2700	1800	900	0	0			300	1000	1100	1200	1300	1400	1500	1600
3300	2600	1700	800	0	0			200	900	1000	1100	1200	1300	1400	1500
3200	2500	1600	700	0	0			100	800	900	1000	1100	1200	1300	1400
3100	2400	1500	600	0	0			0	700	800	900	1000	1100	1200	1300
3000	2300	1400	500	0	0				600	700	800	900	1000	1100	1200
2900	2200	1300	400	0	0				500	600	700	800	900	1000	1100
2800	2100	1200	300	0	0				400	500	600	700	800	900	1000
2700	2000	1100	200	0	0				300	400	500	600	700	800	900
2600	1900	1000	100	0	0				200	300	400	500	600	700	800
2500	1800	900	0	0	0				100	200	300	400	500	600	700
2400	1700	800	0	0	0				0	100	200	300	400	500	600
2300	1600	700	0	0	0					0	100	200	300	400	500
2200	1500	600	0	0	0						0	100	200	300	400
2100	1400	500	0	0	0							0	100	200	300
2000	1300	400	0	0	0								0	100	200
1900	1200	300	0	0	0									0	100
1800	1100	200	0	0	0										0
1700	1000	100	0	0	0										
1600	900	0	0	0	0										
1500	800	0	0	0	0										
1400	700	0	0	0	0										
1300	600	0	0	0	0										
1200	500	0	0	0	0										
1100	400	0	0	0	0										
1000	300	0	0	0	0										
900	200	0	0	0	0										
800	100	0	0	0	0										
700	0	0	0	0	0										
600		0	0	0	0										
500			0	0	0										
400				0	0										
300					0										
200						0									
100							0								
0								0							
1000	1700	1800	1900	2000	2100	2200	2300	1000	1700	1800	1900	2000	2100	2200	2300
Fr.	Tu.	W.	Th.	M.	Sa.	Su.	0	Fr.	Tu.	W.	Th.	M.	Sa.	Su.	0
Tu.	W.	Th.	M.	Sa.	Su.	Fr.	1	Sa.	Fr.	Th.	W.	Tu.	M.	Sa.	Fr.
W.	Th.	M.	Sa.	Su.	Fr.	Tu.	2	Su.	Sa.	Fr.	Th.	W.	Tu.	M.	Sa.
Th.	M.	Sa.	Su.	Fr.	Tu.	W.	3	Fr.	Sa.	Su.	Fr.	Th.	W.	Tu.	M.
M.	Sa.	Su.	Fr.	Tu.	W.	Th.	4	Tu.	Sa.	Su.	Fr.	Th.	W.	Tu.	M.
Sa.	Su.	Fr.	Th.	W.	Tu.	W.	5	W.	Tu.	M.	Sa.	Fr.	Th.	W.	Tu.
Su.	Fr.	Th.	W.	Tu.	W.	Th.	6	Th.	W.	Tu.	M.	Sa.	Fr.	Th.	W.
Fr.	Th.	W.	Tu.	M.	Sa.	Su.	7	W.	Tu.	M.	Sa.	Fr.	Th.	W.	Tu.
Th.	W.	Tu.	M.	Sa.	Su.	Fr.	8	Th.	W.	Tu.	M.	Sa.	Fr.	Th.	W.
W.	Tu.	M.	Sa.	Su.	Fr.	Tu.	9	Fr.	Th.	W.	Tu.	M.	Sa.	Fr.	Th.
Tu.	M.	Sa.	Su.	Fr.	Tu.	W.	10	Tu.	M.	Sa.	Fr.	Th.	W.	Tu.	M.
M.	Sa.	Su.	Fr.	Tu.	W.	Th.	11	W.	Tu.	M.	Sa.	Fr.	Th.	W.	Tu.
Sa.	Su.	Fr.	Th.	W.	Tu.	W.	12	Th.	W.	Tu.	M.	Sa.	Fr.	Th.	W.
Fr.	Th.	W.	Tu.	M.	Sa.	Su.	13	Fr.	Th.	W.	Tu.	M.	Sa.	Fr.	Th.
Th.	W.	Tu.	M.	Sa.	Su.	Fr.	14	Tu.	Sa.	Su.	Fr.	Th.	W.	Tu.	M.
W.	Tu.	M.	Sa.	Su.	Fr.	Tu.	15	W.	Tu.	M.	Sa.	Fr.	Th.	W.	Tu.
Tu.	M.	Sa.	Su.	Fr.	Tu.	W.	16	Th.	W.	Tu.	M.	Sa.	Fr.	Th.	W.
M.	Sa.	Su.	Fr.	Tu.	W.	Th.	17	Fr.	Th.	W.	Tu.	M.	Sa.	Fr.	Th.
Sa.	Su.	Fr.	Th.	W.	Tu.	W.	18	Tu.	Sa.	Su.	Fr.	Th.	W.	Tu.	M.
Fr.	Th.	W.	Tu.	M.	Sa.	Su.	19	W.	Tu.	M.	Sa.	Fr.	Th.	W.	Tu.
Th.	W.	Tu.	M.	Sa.	Su.	Fr.	20	Th.	W.	Tu.	M.	Sa.	Fr.	Th.	W.
W.	Tu.	M.	Sa.	Su.	Fr.	Tu.	21	Fr.	Th.	W.	Tu.	M.	Sa.	Fr.	Th.
Tu.	M.	Sa.	Su.	Fr.	Tu.	W.	22	Tu.	Sa.	Su.	Fr.	Th.	W.	Tu.	M.
M.	Sa.	Su.	Fr.	Tu.	W.	Th.	23	W.	Tu.	M.	Sa.	Fr.	Th.	W.	Tu.
Sa.	Su.	Fr.	Th.	W.	Tu.	W.	24	Th.	W.	Tu.	M.	Sa.	Fr.	Th.	W.
Fr.	Th.	W.	Tu.	M.	Sa.	Su.	25	Fr.	Th.	W.	Tu.	M.	Sa.	Fr.	Th.
Th.	W.	Tu.	M.	Sa.	Su.	Fr.	26	Tu.	Sa.	Su.	Fr.	Th.	W.	Tu.	M.
W.	Tu.	M.	Sa.	Su.	Fr.	Tu.	27	W.	Tu.	M.	Sa.	Fr.	Th.	W.	Tu.
Tu.	M.	Sa.	Su.	Fr.	Tu.	W.	28	Th.	W.	Tu.	M.	Sa.	Fr.	Th.	W.
M.	Sa.	Su.	Fr.	Tu.	W.	Th.	29	Fr.	Th.	W.	Tu.	M.	Sa.	Fr.	Th.
Sa.	Su.	Fr.	Th.	W.	Tu.	W.	30	Tu.	Sa.	Su.	Fr.	Th.	W.	Tu.	M.
Fr.	Th.	W.	Tu.	M.	Sa.	Su.	31	W.	Tu.	M.	Sa.	Fr.	Th.	W.	Tu.

## Second Part—for Months or Days.

Year	January	February	March	April	May	June	July	August	September
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11	11	11
12	12	12	12	12	12	12	12	12	12
13	13	13	13	13	13	13	13	13	13
14	14	14	14	14	14	14	14	14	14
15	15	15	15	15	15	15	15	15	15
16	16	16	16	16	16	16	16	16	16
17	17	17	17	17	17	17	17	17	17
18	18	18	18	18	18	18	18	18	18
19	19	19	19	19	19	19	19	19	19
20	20	20	20	20	20	20	20	20	20
21	21	21	21	21	21	21	21	21	21
22	22	22	22	22	22	22	22	22	22
23	23	23	23	23	23	23	23	23	23
24	24	24	24	24	24	24	24	24	24
25	25	25	25	25	25	25	25	25	25
26	26	26	26	26	26	26	26	26	26
27	27	27	27	27	27	27	27	27	27
28	28	28	28	28	28	28	28	28	28
29	29	29	29	29	29	29	29	29	29
30	30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31	31

## EXPLANATION.

Any year being given, either before or after Christ, Old or New Style, find the century at the top of the Table and the odd years in the middle column. The square of intersection shows the day on which the year commences. Then look for the day of the month in the lower part of the same table, and on a line with it, in the first column, is shown the number of days to be added to the initial day of the year first found: thus the 12th of April, 1853, will fall on Sunday + 6 = Saturday.

If the given year be a leap year, and the month January or February, it must be looked for under January, L. Y. or February, L. Y. A leap year after Christ is marked by a dot on the right hand:—e.g. Christ, by a dot on the left.



## GENERAL TABLE OF THE HIJRA.

*Note.*—The Hijra Chronological Table has been collated with that published in Playfair's 'Chronology,' as several errors of the press were discovered in Warren's 'Kāla Sankalita.' The dates are expressed in old or Julian style up to the year A.D. 1750, after which they are continued in new or Gregorian style.

In the initial *feries*, 1 stands for Sunday, 2 for Monday, etc.

For an explanation of the Muhammadan era, see page 144, and for the application of the present table in conjunction with the calendric scale for the lunar year, see pages 175 and 185.

There are errors in many other published tales of the Hijra, and as those consulting them may thus be led to wrong results, it may be as well here to notice a few of the discrepancies which a cursory examination has discovered. Thus in 'Tables of the Christian and Muhammadan Eras,' published in Calcutta in the year 1790, by James White, the year 1800, A.D., is made a leap year, and all the Christian dates subsequent thereto are consequently in error one day, being in defect.

In the Sudur Dewanee tables<sup>1</sup> the irregularities of the earlier Hijra dates cannot be reconciled on any principle of a single mistake pervading them; and as the false dates have been in a manner officially promulgated at the head of the Government Regulations, it becomes the more necessary to point them out in a conspicuous manner. The Tables begin with the year 1765. The following are the corrections required for the first day of Muharram, up to the year 1197:—

A.D.		A.D.	
1178	for 30th July, read 1st July, 1764.	1186	for 20th Mar., read 14th Mar. 1774.
1179	" 24th June, " 20th June.	1189	" 9th Mar., " 4th Mar.
1180	" 2nd June, " 9th June.	1190	" 28th Feb., " 21st Feb.
1181	" 2nd June, " 30th May.	1191	" 16th Feb., " 9th Feb.
1182	" 22nd May, " 18th May.	1192	" 4th Feb., " 30th Jan.
1183	" 13th May, " 7th May.	1193	" 22nd Jan., " 19th Jan.
1184	" 3rd May, " 27th April.	1194	" 11th Jan., " 1st Jan.
1185	" 24th April, " 16th April.	1195	" 30th Dec., " 28th Dec.
1186	" 2nd April, " 4th April.	1196	" 18th Dec., " 17th Dec.
1187	" 30th Mar., " 25th Mar.	1197	" 8th Dec., " 7th Dec.

After this, the differences seldom exceed one day, and are caused by the wrong years being made bisextile. The jalūs years of Shāh A'lam are all one year in advance.

Captain Jervis' Tables, printed at Bombay, are correct, differing only occasionally in the position of the intervalary years.

<sup>1</sup> The following, I am informed, is the mode in which the Sudur Dewanee Almanack is prepared. The Pandit of the Court, at the beginning of each English year, submits an almanack for the English and native Eras. One copy of this is kept in the office, and another forwarded to Government.

It may be noticed that the popular commencement of the Hijra year occurs on the first sight of the new moon; but this cannot affect its chronological determination.

TABLE XIII.—Of correspondence between the *Hijra* and the *Julian* and *Gregorian* Calendars of Europe, showing the first day of each year of the *Hijra* Calendar.

HIRRA YEAR.	CHRISTIAN ERA.			HIRRA YEAR.	CHRISTIAN ERA.			HIRRA YEAR.	CHRISTIAN ERA.		
	Year.	Month.	Day.		Year.	Month.	Day.		Year.	Month.	Day.
1	622	16 July	6	56 H.	675	25 Nov	1	111 H.	729	5 April	5
2 H.	623	5 July	3	57	676	14 Nov	6	112	730	26 March	1
3	624	24 June	1	58	677	3 Nov	2	113	731	15 March	5
4	625	13 June	5	59 H.	678	23 Oct	7	114 H.	732	3 March	2
5 H.	626	2 June	2	60	679	12 Oct	6	115	733	21 Feb	7
6	627	23 May	7	61	680	1 Oct	2	116 H.	734	10 Feb	4
7 H.	628	11 May	4	62 H.	681	20 Sept	6	117	735	31 Jan	2
8	629	1 May	2	63	682	10 Sept	4	118	736	20 Jan	6
9	630	20 April	6	64	683	30 Aug	1	119 H.	737	8 Jan	8
10 H.	631	9 April	3	65 H.	684	18 Aug	5	120	737	29 Dec	1
11	632	29 March	1	66	685	6 Aug	2	121	738	18 Dec	5
12	633	18 March	5	67 H.	686	28 July	7	122 H.	739	7 Dec	2
13 H.	634	7 March	2	68	687	18 July	5	123	740	26 Nov	7
14	635	25 Feb	7	69	688	6 July	2	124	741	15 Nov	4
15	636	14 Feb	4	70 H.	689	25 June	6	125 H.	742	4 Nov	1
16 H.	637	2 Feb	1	71	690	16 June	4	126	743	25 Oct	6
17	638	23 Jan	6	72	691	4 June	1	127 H.	744	15 Oct	3
18 H.	639	12 Jan	3	73 H.	692	23 May	5	128	745	3 Oct	1
19	640	2 Jan	1	74	693	13 May	3	129	746	22 Sept	5
20	640	21 Dec	5	75	694	2 May	7	130 H.	747	11 Sept	2
21 H.	641	10 Dec	2	76 H.	695	21 April	4	131	748	31 Aug	7
22	642	30 Nov	7	77	696	10 April	2	132	749	20 Aug	4
23	643	19 Nov	4	78 H.	697	29 March	6	133 H.	750	9 Aug	1
24 H.	644	7 Nov	1	79	698	20 March	4	134	751	30 July	6
25	645	28 Oct	5	80	699	9 March	1	135	752	18 July	3
26 H.	646	17 Oct	3	81 H.	700	26 Feb	5	136 H.	753	7 July	7
27	647	7 Oct	1	82	701	15 Feb	3	137	754	27 June	6
28	648	25 Sept	6	83	702	4 Feb	7	138 H.	755	16 June	2
29 H.	649	14 Sept	3	84 H.	703	24 Jan	4	139	756	5 June	7
30	650	4 Sept	7	85	704	14 Jan	2	140	757	25 May	4
31	651	24 Aug	4	86 H.	705	2 Jan	6	141 H.	758	14 May	1
32 H.	652	12 Aug	1	87	706	23 Dec	4	142	759	4 May	6
33	653	2 Aug	6	88	706	12 Dec	1	143	760	22 April	3
34	654	22 July	3	89 H.	707	1 Dec	5	144 H.	761	11 April	7
35 H.	655	11 July	7	90	708	20 Nov	3	145	762	1 April	5
36	656	30 June	5	91	709	9 Nov	7	146 H.	763	21 March	2
37 H.	657	19 June	2	92 H.	710	29 Oct	4	147	764	10 March	7
38	658	9 June	7	93	711	19 Oct	2	148	765	27 Feb	4
39	659	29 May	4	94	712	7 Oct	6	149 H.	766	16 Feb	1
40 H.	660	17 May	1	95 H.	713	26 Sept	3	150	767	6 Feb	6
41	661	7 May	6	96	714	16 Sept	1	151	768	26 Jan	3
42	662	26 April	3	97 H.	715	5 Sept	5	152 H.	769	14 Jan	7
43 H.	663	16 April	7	98	716	25 Aug	3	153	770	4 Jan	5
44	664	4 April	5	99	717	14 Aug	7	154	770	24 Dec	2
45	665	24 March	2	100 H.	718	3 Aug	4	155 H.	771	13 Dec	5
46 H.	666	13 March	6	101	719	24 July	2	156	772	2 Dec	4
47	667	3 March	4	102	720	12 July	6	157 H.	773	21 Nov	1
48 H.	668	20 Feb	1	103 H.	721	1 July	3	158	774	11 Nov	6
49	669	9 Feb	6	104	722	21 June	1	159	775	31 Oct	3
50	670	29 Jan	3	105	723	10 June	5	160 H.	776	19 Oct	7
51 H.	671	18 Jan	7	106 H.	724	29 May	2	161	777	9 Oct	5
52	672	8 Jan	5	107	725	19 May	7	162	778	28 Sept	2
53	673	27 Dec	2	108 H.	726	8 May	4	163 H.	779	17 Sept	6
54 H.	674	16 Dec	6	109	727	28 April	2	164	780	6 Sept	4
55	674	6 Dec	4	110	728	16 April	6	165	781	26 Aug	1

HINDU YEAR.	CHRISTIAN ERA.			HINDU YEAR.	CHRISTIAN ERA.			HINDU YEAR.	CHRISTIAN ERA.		
	Year.	Month.	Day.		Year.	Month.	Day.		Year.	Month.	Day.
166 B.	782	15 Aug.	5	236 B.	840	31 Oct.	1	286 B.	899	17 Jan.	4
167	783	5 Aug.	3	237	841	21 Oct.	6	287	900	7 Jan.	2
168 B.	784	24 July.	7	238 B.	842	10 Oct.	5	288 B.	900	26 Dec.	6
169	785	14 July.	5	239	843	30 Sept.	1	289	901	16 Dec.	4
170	786	3 July.	2	240	844	18 Sept.	5	290	902	5 Dec.	1
171 B.	787	22 June.	6	241 B.	845	7 Sept.	2	291 B.	903	24 Nov.	6
172	788	11 June.	4	242	846	28 Aug.	7	292	904	13 Nov.	3
173	789	31 May.	2	243	847	17 Aug.	4	293	905	2 Nov.	7
174 B.	790	20 May.	5	244 B.	848	6 Aug.	1	294 B.	906	22 Oct.	4
175	791	10 May.	3	245	849	26 July.	6	295	907	12 Oct.	2
176 B.	792	28 April.	7	246 B.	850	15 July.	3	296 B.	908	30 Sept.	6
177	793	18 April.	5	247	851	5 July.	1	297	909	20 Sept.	4
178	794	7 April.	2	248	852	23 June.	5	298	910	9 Sept.	1
179 B.	795	27 March.	6	249 B.	853	12 June.	3	299 B.	911	28 Aug.	5
180	796	16 March.	4	250	854	2 June.	7	300	912	18 Aug.	3
181	797	5 March.	1	251	855	22 May.	4	301	913	7 Aug.	7
182 B.	798	22 Feb.	6	252 B.	856	10 May.	1	302 B.	914	27 July.	4
183	799	12 Feb.	3	253	857	30 April.	6	303	915	17 July.	2
184	800	1 Feb.	7	254	858	19 April.	3	304	916	6 July.	6
185 B.	801	20 Jan.	4	255 B.	859	8 April.	7	305 B.	917	24 June.	3
186	802	10 Jan.	2	256	860	28 March.	5	306	918	14 June.	1
187 B.	803	30 Dec.	6	257 B.	861	17 March.	1	307 B.	919	3 June.	5
188	804	20 Dec.	4	258	862	7 March.	7	308	920	23 May.	3
189	805	8 Dec.	1	259	863	24 Feb.	4	309	921	12 May.	7
190 B.	806	27 Nov.	5	260 B.	864	13 Feb.	1	310 B.	922	1 May.	4
191	807	17 Nov.	3	261	865	2 Feb.	6	311	923	21 April.	2
192	808	6 Nov.	7	262	866	22 Jan.	3	312	924	9 April.	6
193 B.	809	28 Oct.	4	263 B.	867	11 Jan.	7	313 B.	925	29 March.	3
194	809	18 Oct.	2	264	868	1 Jan.	5	314	926	19 March.	1
195	810	4 Oct.	6	265	869	30 Dec.	2	315	927	8 March.	5
196 B.	811	23 Sept.	8	266 B.	870	19 Dec.	7	316 B.	928	28 Feb.	2
197	812	12 Sept.	1	267	871	29 Nov.	4	317	929	14 Feb.	7
198 B.	813	1 Sept.	5	268 B.	872	18 Nov.	1	318 B.	930	3 Feb.	4
199	814	22 Aug.	3	269	873	7 Nov.	6	319	931	24 Jan.	2
200	815	11 Aug.	7	270	874	27 Oct.	3	320	932	13 Jan.	6
201 B.	816	30 July.	4	271 B.	875	16 Oct.	7	321 B.	933	1 Jan.	3
202	817	19 July.	2	272	876	6 Oct.	5	322	934	22 Dec.	1
203	818	9 July.	6	273	877	24 Sept.	2	323	935	11 Dec.	5
204 B.	819	28 June.	3	274 B.	878	13 Sept.	6	324 B.	936	30 Nov.	2
205	820	17 June.	1	275	879	3 Sept.	4	325	937	19 Nov.	7
206 B.	821	6 June.	5	276 B.	880	23 Aug.	1	326 B.	938	8 Nov.	4
207	822	27 May.	3	277	881	12 Aug.	6	327	939	29 Oct.	2
208	823	16 May.	7	278	882	1 Aug.	3	328	940	18 Oct.	6
209 B.	824	4 May.	4	279 B.	883	21 July.	7	329 B.	941	8 Oct.	3
210	825	24 April.	2	280	884	11 July.	5	330	942	26 Sept.	1
211	826	13 April.	6	281	885	29 June.	2	331	943	16 Sept.	5
212 B.	827	2 April.	3	282 B.	886	18 June.	6	332 B.	944	4 Sept.	2
213	828	22 March.	1	283	887	8 June.	4	333	945	24 Aug.	7
214	829	11 March.	5	284	888	28 May.	1	334	946	13 Aug.	4
215 B.	830	28 Feb.	2	285 B.	889	19 May.	5	335 B.	947	2 Aug.	1
216	831	18 Feb.	7	286	890	8 May.	3	336	948	23 July.	6
217 B.	832	7 Feb.	4	287 B.	891	29 April.	7	337 B.	949	14 July.	3
218	833	27 Jan.	2	288	892	18 April.	5	338	950	1 July.	1
219	834	16 Jan.	6	289	893	8 April.	2	339	951	20 June.	5
220 B.	835	5 Jan.	3	290 B.	894	23 March.	6	340 B.	952	9 June.	2
221	836	26 Dec.	1	291	895	13 March.	4	341	953	29 May.	7
222	837	14 Dec.	5	292	896	2 March.	1	342	954	18 May.	4
223 B.	838	3 Dec.	2	293 B.	897	19 Feb.	5	343 B.	955	7 May.	1
224	839	23 Nov.	7	294	898	8 Feb.	2	344	956	27 April.	6
225	840	12 Nov.	4	295	899	28 Jan.	7	345	957	15 April.	3



HIRZ YEAR.	CHRISTIAN ERA.			HIRZ YEAR.	CHRISTIAN ERA.			HIRZ YEAR.	CHRISTIAN ERA.		
	Year.	Month.	Day.		Year.	Month.	Day.		Year.	Month.	Day.
346 B.	957	4 April	7	408 B.	1610	21 June	3	468 B.	1073	6 Sept.	6
347	958	25 March	5	407	1616	10 June	1	467	1074	27 Aug.	4
348 B.	959	14 March	2	406 B.	1617	30 May	6	466 B.	1075	16 Aug.	1
349	960	3 March	7	405	1618	20 May	3	465	1076	5 Aug.	6
350	961	20 Feb.	4	410	1619	9 May	7	470	1077	25 July	3
351 B.	962	9 Feb.	1	411 B.	1620	27 April	4	471 B.	1078	14 July	7
352	963	30 Jan.	6	412	1621	17 April	3	472	1079	4 July	5
353	964	19 Jan.	5	413	1622	6 April	6	473	1080	22 June	2
354 B.	965	7 Jan.	7	414 B.	1623	26 March	3	474 B.	1081	11 June	6
355	966	28 Dec.	5	415	1624	15 March	1	475	1082	1 June	4
356 B.	967	17 Dec.	2	416 B.	1625	4 March	5	476 B.	1083	21 May	1
357	967	7 Dec.	7	417	1626	22 Feb.	3	477	1084	10 May	6
358	968	26 Nov.	4	418	1627	11 Feb.	7	478	1085	29 April	3
359 B.	969	14 Nov.	1	419 B.	1628	31 Jan.	4	479 B.	1086	18 April	7
360	970	4 Nov.	6	420	1629	20 Jan.	2	480	1087	8 April	5
361	971	24 Oct.	5	421	1630	9 Jan.	6	481	1088	27 March	2
362 B.	972	12 Oct.	7	422 B.	1631	29 Dec.	3	482 B.	1089	16 March	6
363	973	2 Oct.	5	423	1632	19 Dec.	1	483	1090	6 March	4
364	974	21 Sept.	2	424	1633	7 Dec.	5	484	1091	23 Feb.	1
365 B.	975	10 Sept.	6	425 B.	1634	26 Nov.	3	485 B.	1092	12 Feb.	5
366	976	30 Aug.	4	426	1635	16 Nov.	7	486	1093	1 Feb.	3
367 B.	977	19 Aug.	1	427 B.	1636	6 Nov.	4	487 B.	1094	21 Jan.	7
368	978	9 Aug.	6	428	1637	25 Oct.	2	488	1095	11 Jan.	6
369	979	29 July	3	429	1638	14 Oct.	6	489	1096	31 Dec.	2
370 B.	980	17 July	7	430 B.	1639	3 Oct.	5	490 B.	1097	19 Dec.	6
371	981	7 July	6	431	1640	23 Sept.	1	491	1098	9 Dec.	4
372	982	26 June	2	432	1641	11 Sept.	5	492	1099	28 Nov.	1
373 B.	983	15 June	6	433 B.	1642	31 Aug.	3	493 B.	1100	17 Nov.	5
374	984	4 June	4	434	1643	21 Aug.	7	494	1101	6 Nov.	3
375	985	24 May	1	435	1644	10 Aug.	4	495	1102	26 Oct.	7
376 B.	986	12 May	3	436 B.	1645	29 July	1	496 B.	1103	15 Oct.	4
377	987	3 May	2	437	1646	19 July	6	497	1104	5 Oct.	2
378 B.	988	21 April	7	438 B.	1647	8 July	3	498 B.	1105	23 Sept.	6
379	989	11 April	5	439	1648	26 June	1	499	1106	13 Sept.	4
380	990	31 March	3	440	1649	16 June	5	500	1107	2 Sept.	1
381 B.	991	20 March	6	441 B.	1650	5 June	2	501 B.	1108	23 Aug.	5
382	992	9 March	4	442	1651	25 May	7	502	1109	11 Aug.	3
383	993	28 Feb.	1	443	1652	15 May	4	503	1110	31 July	7
384 B.	994	16 Feb.	5	444 B.	1653	2 May	1	504 B.	1111	20 July	4
385	995	6 Feb.	3	445	1654	23 April	6	505	1112	10 July	2
386 B.	996	25 Jan.	7	446 B.	1655	12 April	3	506 B.	1113	28 June	6
387	997	14 Jan.	5	447	1656	2 April	1	507	1114	18 June	4
388	998	3 Jan.	2	448	1657	21 March	5	508	1115	7 June	1
389 B.	999	23 Dec.	6	449 B.	1658	19 March	3	509 B.	1116	27 May	5
390	1000	13 Dec.	4	450	1659	8 March	7	510	1117	16 May	3
391	1001	1 Dec.	1	451	1660	17 Feb.	4	511	1118	5 May	7
392 B.	1002	20 Nov.	5	452 B.	1661	6 Feb.	1	512 B.	1119	24 April	6
393	1003	10 Nov.	3	453	1662	26 Jan.	6	513	1120	14 April	2
394	1004	30 Oct.	7	454	1663	15 Jan.	3	514	1121	3 April	5
395 B.	1005	18 Oct.	4	455 B.	1664	4 Jan.	7	515 B.	1122	22 March	8
396	1006	8 Oct.	2	456	1665	25 Dec.	3	516	1123	12 March	1
397 B.	1007	27 Sept.	6	457 B.	1666	13 Dec.	2	517 B.	1124	1 March	5
398	1008	17 Sept.	4	458	1667	3 Dec.	7	518	1125	15 Feb.	9
399	1009	5 Sept.	1	459	1668	22 Nov.	3	519	1126	7 Feb.	7
400 B.	1010	25 Aug.	5	460 B.	1669	11 Nov.	1	520 B.	1127	27 Jan.	4
401	1011	15 Aug.	3	461	1670	31 Oct.	6	521	1128	17 Jan.	2
402	1012	4 Aug.	7	462	1671	20 Oct.	3	522	1129	6 Jan.	6
403 B.	1013	23 July	4	463 B.	1672	9 Oct.	7	523 B.	1130	26 Dec.	3
404	1014	13 July	2	464	1673	29 Sept.	5	524	1131	16 Dec.	1
405	1015	2 July	5	465	1674	17 Sept.	2	525	1132	4 Dec.	5



HINDU YEAR.	CHRISTIAN ERA.			HINDU YEAR.	CHRISTIAN ERA.			HINDU YEAR.	CHRISTIAN ERA.		
	Year.	Month.	Day.		Year.	Month.	Day.		Year.	Month.	Day.
526 B.	1131	25 Nov.	2	585 B.	1190	8 Feb.	5	645 B.	1248	26 April.	1
527	1132	12 Nov.	7	587	1191	29 Jan.	7	647	1249	16 April.	6
528 B.	1133	1 Nov.	4	588 B.	1192	18 Jan.	7	648 B.	1250	5 April.	3
529	1134	22 Oct.	3	589	1193	7 Jan.	5	649	1251	26 March.	1
530	1135	11 Oct.	6	590	1193	27 Dec.	2	650	1252	14 March.	5
531 B.	1136	29 Sept.	3	591 B.	1194	16 Dec.	0	651 B.	1253	3 March.	2
532	1137	19 Sept.	1	592	1195	6 Dec.	4	652	1254	21 Feb.	7
533	1138	8 Sept.	8	593	1196	24 Nov.	1	653	1255	10 Feb.	4
534 B.	1139	28 Aug.	2	594 B.	1197	13 Nov.	0	654 B.	1256	30 Jan.	1
535	1140	17 Aug.	7	595	1198	3 Nov.	3	655	1257	19 Jan.	6
536 B.	1141	6 Aug.	4	596 B.	1199	23 Oct.	7	656 B.	1258	8 Jan.	3
537	1142	27 July.	3	597	1200	12 Oct.	5	657	1259	29 Dec.	1
538	1143	16 July.	6	598	1201	1 Oct.	2	658	1260	18 Dec.	5
539 B.	1144	4 July.	3	599 B.	1202	30 Sept.	6	659 B.	1260	6 Dec.	2
540	1145	24 June.	1	600	1203	19 Sept.	4	660	1261	26 Nov.	7
541	1146	13 June.	5	601	1204	29 Aug.	1	661	1262	15 Nov.	4
542 B.	1147	2 June.	2	602 B.	1205	18 Aug.	0	662 B.	1263	4 Nov.	1
543	1148	22 May.	7	603	1206	8 Aug.	3	663	1264	24 Oct.	6
544	1149	11 May.	4	604	1207	28 July.	7	664	1265	13 Oct.	3
545 B.	1150	30 April.	1	605 B.	1208	18 July.	4	665 B.	1266	2 Oct.	7
546	1151	20 April.	0	606	1209	8 July.	2	666	1267	22 Sept.	5
547 B.	1152	8 April.	3	607 B.	1210	25 June.	0	667 B.	1268	10 Sept.	2
548	1153	29 March.	1	608	1211	15 June.	4	668	1269	31 Aug.	7
549	1154	18 March.	5	609	1212	3 June.	1	669	1270	20 Aug.	4
550 B.	1155	7 March.	2	610 B.	1213	23 May.	5	670 B.	1271	9 Aug.	1
551	1156	26 Feb.	7	611	1214	13 May.	3	671	1272	29 July.	6
552	1157	15 Feb.	4	612	1215	2 May.	7	672	1273	18 July.	3
553 B.	1158	2 Feb.	1	613 B.	1216	20 April.	4	673 B.	1274	7 July.	7
554	1159	23 Jan.	0	614	1217	10 April.	2	674	1275	27 June.	5
555	1160	12 Jan.	3	615	1218	30 March.	6	675	1276	16 June.	2
556 B.	1160	31 Dec.	7	616 B.	1219	19 March.	9	676 B.	1277	4 June.	0
557	1161	21 Dec.	5	617	1220	8 March.	1	677	1278	25 May.	4
558 B.	1162	10 Dec.	2	618 B.	1221	26 Feb.	0	678 B.	1279	14 May.	1
559	1163	30 Nov.	7	619	1222	15 Feb.	3	679	1280	3 May.	0
560	1164	18 Nov.	4	620	1223	4 Feb.	7	680	1281	23 April.	3
561 B.	1165	7 Nov.	1	621 B.	1224	24 Jan.	4	681 B.	1282	11 April.	7
562	1166	28 Oct.	0	622	1225	13 Jan.	2	682	1283	1 April.	5
563	1167	17 Oct.	3	623	1226	2 Jan.	0	683	1284	20 March.	2
564 B.	1168	6 Oct.	7	624 B.	1227	22 Dec.	3	684 B.	1285	9 March.	0
565	1169	26 Sept.	5	625	1227	12 Dec.	1	685	1286	27 Feb.	4
566 B.	1170	14 Sept.	2	626 B.	1228	30 Nov.	5	686 B.	1287	16 Feb.	1
567	1171	4 Sept.	7	627	1229	20 Nov.	3	687	1288	6 Feb.	6
568	1172	23 Aug.	4	628	1230	9 Nov.	7	688	1289	25 Jan.	3
569 B.	1173	12 Aug.	1	629 B.	1231	29 Oct.	4	689 B.	1290	14 Jan.	7
570	1174	2 Aug.	6	630	1232	18 Oct.	2	690	1291	4 Jan.	5
571	1175	22 July.	3	631	1233	7 Oct.	6	691	1291	24 Dec.	2
572 B.	1176	10 July.	7	632 B.	1234	26 Sept.	3	692 B.	1292	12 Dec.	6
573	1177	30 June.	5	633	1235	16 Sept.	1	693	1293	2 Dec.	4
574	1178	19 June.	2	634	1236	4 Sept.	5	694	1294	21 Nov.	1
575 B.	1179	8 June.	0	635 B.	1237	24 Aug.	2	695 B.	1295	10 Nov.	5
576	1180	28 May.	4	636	1238	14 Aug.	7	696	1296	30 Oct.	3
577 B.	1181	17 May.	1	637 B.	1239	3 Aug.	4	697 B.	1297	19 Oct.	7
578	1182	7 May.	0	638	1240	23 July.	2	698	1298	9 Oct.	5
579	1183	26 April.	5	639	1241	12 July.	6	699	1299	28 Sept.	2
580 B.	1184	14 April.	7	640 B.	1242	1 July.	3	700 B.	1300	16 Sept.	0
581	1185	4 April.	5	641	1243	21 June.	1	701	1301	6 Sept.	4
582	1186	24 March.	2	642	1244	9 June.	3	702	1302	26 Aug.	1
583 B.	1187	13 March.	6	643 B.	1245	29 May.	2	703 B.	1303	16 Aug.	5
584	1188	2 March.	4	644	1246	19 May.	7	704	1304	4 Aug.	3
585	1189	19 Feb.	1	645	1247	8 May.	4	705	1305	24 July.	7

HJRA YEAR.	CHRISTIAN REG.			HJRA YEAR.	CHRISTIAN REG.			HJRA YEAR.	CHRISTIAN REG.		
	Year.	Month.	Day.		Year.	Month.	Day.		Year.	Month.	Day.
700 H.	1306	15 July	4	705 H.	1364	28 Sept.	7	826 H.	1422	15 Dec.	3
707	1307	3 July	2	707	1365	18 Sept.	5	827	1423	5 Dec.	1
708 H.	1308	21 June	6	708 H.	1366	7 Sept.	2	828 H.	1424	25 Nov.	5
709	1309	11 June	4	709	1367	28 Aug.	7	829	1425	15 Nov.	3
710	1310	31 May	1	710	1368	16 Aug.	4	830	1426	2 Nov.	7
711 H.	1311	20 May	5	711 H.	1369	5 Aug.	1	831 H.	1427	22 Oct.	4
712	1312	9 May	3	712	1370	25 July	6	832	1428	11 Oct.	2
713	1313	28 April	7	713	1371	15 July	3	833	1429	30 Sept.	6
714 H.	1314	17 April	4	714 H.	1372	3 July	7	834 H.	1430	19 Sept.	3
715	1315	7 April	2	715	1373	23 June	5	835	1431	9 Sept.	1
716 H.	1316	26 March	6	716 H.	1374	12 June	2	836 H.	1432	28 Aug.	5
717	1317	16 March	4	717	1375	2 June	7	837	1433	18 Aug.	3
718	1318	5 March	1	718	1376	21 May	4	838	1434	7 Aug.	7
719 H.	1319	22 Feb.	5	719 H.	1377	10 May	1	839 H.	1435	27 July	4
720	1320	12 Feb.	3	720	1378	30 April	6	840	1436	16 July	2
721	1321	31 Jan.	7	721	1379	19 April	3	841	1437	5 July	6
722 H.	1322	20 Jan.	4	722 H.	1380	7 April	7	842 H.	1438	24 June	3
723	1323	10 Jan.	2	723	1381	28 March	5	843	1439	14 June	1
724	1324	30 Dec.	6	724	1382	17 March	3	844	1440	3 June	5
725 H.	1325	18 Dec.	3	725 H.	1383	6 March	6	845 H.	1441	22 May	2
726	1326	8 Dec.	1	726	1384	24 Feb.	4	846	1442	12 May	7
727 H.	1327	27 Nov.	5	727 H.	1385	12 Feb.	1	847 H.	1443	1 May	4
728	1328	17 Nov.	3	728	1386	2 Feb.	5	848	1444	20 April	2
729	1329	6 Nov.	7	729	1387	22 Jan.	3	849	1445	9 April	6
730 H.	1330	26 Oct.	4	730 H.	1388	11 Jan.	7	850 H.	1446	29 March	3
731	1331	15 Oct.	2	731	1389	31 Dec.	5	851	1447	19 March	1
732	1332	4 Oct.	6	732	1390	20 Dec.	3	852	1448	7 March	5
733 H.	1333	22 Sept.	2	733 H.	1391	9 Dec.	6	853 H.	1449	24 Feb.	2
734	1334	12 Sept.	1	734	1392	29 Nov.	4	854	1450	14 Feb.	7
735	1335	1 Sept.	5	735	1393	17 Nov.	1	855	1451	5 Feb.	4
736 H.	1336	31 Aug.	3	736 H.	1394	6 Nov.	5	856 H.	1452	25 Jan.	1
737	1337	20 Aug.	7	737	1395	27 Oct.	3	857	1453	12 Jan.	6
738 H.	1338	30 July	4	738 H.	1396	16 Oct.	7	858 H.	1454	1 Jan.	3
739	1339	20 July	2	739	1397	5 Oct.	5	859	1455	22 Dec.	1
740	1340	9 July	6	800	1398	24 Sept.	2	860	1456	11 Dec.	5
741 H.	1341	27 June	3	801 H.	1399	12 Sept.	6	861 H.	1457	29 Nov.	2
742	1342	17 June	1	802	1400	3 Sept.	4	862	1458	19 Nov.	7
743	1343	6 June	5	803	1401	22 Aug.	1	863	1459	8 Nov.	4
744 H.	1344	24 May	2	804 H.	1402	11 Aug.	5	864 H.	1460	28 Oct.	1
745	1345	14 May	7	805	1403	1 Aug.	3	865	1461	17 Oct.	6
746 H.	1346	4 May	4	806 H.	1404	21 July	7	866 H.	1462	6 Oct.	3
747	1347	24 April	2	807	1405	10 July	5	867	1463	26 Sept.	1
748	1348	13 April	6	808	1406	29 June	2	868	1464	15 Sept.	5
749 H.	1349	1 April	3	809 H.	1407	18 June	6	869 H.	1465	3 Sept.	2
750	1350	22 March	1	810	1408	8 June	4	870	1466	24 Aug.	7
751	1351	11 March	5	811	1409	27 May	1	871	1467	13 Aug.	4
752 H.	1352	28 Feb.	2	812 H.	1410	16 May	5	872 H.	1468	2 Aug.	1
753	1353	18 Feb.	7	813	1411	6 May	3	873	1469	22 July	6
754	1354	6 Feb.	4	814	1412	25 April	7	874	1470	11 July	3
755 H.	1355	26 Jan.	1	815 H.	1413	13 April	4	875 H.	1471	30 June	7
756	1356	16 Jan.	6	816	1414	3 April	2	876	1472	20 June	5
757 H.	1357	5 Jan.	3	817 H.	1415	23 March	6	877 H.	1473	8 June	2
758	1358	26 Dec.	1	818	1416	13 March	4	878	1474	29 May	7
759	1359	14 Dec.	5	819	1417	1 March	1	879	1475	18 May	4
760 H.	1360	3 Dec.	2	820 H.	1418	15 Feb.	5	880 H.	1476	7 May	1
761	1361	23 Nov.	7	821	1419	5 Feb.	3	881	1477	26 April	6
762	1362	11 Nov.	4	822	1420	24 Jan.	7	882	1478	15 April	3
763 H.	1363	31 Oct.	1	823 H.	1421	17 Jan.	4	883 H.	1479	4 April	7
764	1364	21 Oct.	6	824	1422	6 Jan.	2	884	1480	25 March	5
765	1365	10 Oct.	3	825	1423	26 Dec.	6	885	1481	13 March	2

HINDU YEAR.	CHRISTIAN ERA.			HINDU YEAR.	CHRISTIAN ERA.			HINDU YEAR.	CHRISTIAN ERA.		
	Year.	Month.	Day.		Year.	Month.	Day.		Year.	Month.	Day.
886 B.	1481	2 March	6	945 B.	1539	19 May	2	1006 B.	1597	4 Aug	6
887	1482	26 Feb	4	947	1540	8 May	7	1007	1598	25 July	3
888 B.	1483	9 Feb	1	948 B.	1541	27 April	4	1008 B.	1599	14 July	7
889	1484	30 Jan	6	949	1542	17 April	2	1009	1600	3 July	5
890	1485	18 Jan	3	950	1543	6 April	6	1010	1601	22 June	2
891 B.	1486	7 Jan	7	951 B.	1544	25 March	3	1011 B.	1602	11 June	6
892	1486	28 Dec	6	952	1545	15 March	1	1012	1603	1 June	4
893	1487	17 Dec	2	953	1546	4 March	5	1013	1604	20 May	1
894 B.	1488	5 Dec	8	954 B.	1547	21 Feb	2	1014 B.	1605	9 May	5
895	1489	25 Nov	4	955	1548	11 Feb	7	1015	1606	29 April	3
896 B.	1490	14 Nov	1	956 B.	1549	30 Jan	4	1016 B.	1607	18 April	7
897	1491	4 Nov	6	957	1550	20 Jan	2	1017	1608	7 April	5
898	1492	23 Oct	3	958	1551	9 Jan	6	1018	1609	27 March	2
899 B.	1493	12 Oct	7	959 B.	1552	29 Dec	3	1019 B.	1610	16 March	6
900	1494	2 Oct	3	960	1553	18 Dec	1	1020	1611	6 March	4
901	1495	21 Sept	2	961	1554	7 Dec	5	1021	1612	25 Feb	1
902 B.	1496	9 Sept	8	962 B.	1555	26 Nov	2	1022 B.	1613	14 Feb	5
903	1497	30 Aug	4	963	1556	16 Nov	7	1023	1614	1 Feb	3
904	1498	19 Aug	1	964	1556	4 Nov	4	1024	1615	21 Jan	7
905 B.	1499	8 Aug	5	965 B.	1557	24 Oct	1	1025 B.	1616	10 Jan	4
906	1500	29 July	2	966	1558	14 Oct	6	1026	1617	30 Dec	2
907 B.	1501	17 July	7	967 B.	1559	3 Oct	2	1027 B.	1617	19 Dec	6
908	1502	7 July	6	968	1560	22 Sept	1	1028	1618	9 Dec	4
909	1503	26 June	2	969	1561	11 Sept	8	1029	1619	28 Nov	1
910 B.	1504	14 June	6	970 B.	1562	31 Aug	2	1030 B.	1620	16 Nov	5
911	1505	4 June	4	971	1563	21 Aug	7	1031	1621	6 Nov	3
912	1506	24 May	1	972	1564	9 Aug	4	1032	1622	26 Oct	7
913 B.	1507	13 May	4	973 B.	1565	29 July	1	1033 B.	1623	15 Oct	4
914	1508	2 May	3	974	1566	19 July	6	1034	1624	4 Oct	2
915	1509	21 April	7	975	1567	8 July	3	1035	1625	23 Sept	6
916 B.	1510	10 April	4	976 B.	1568	26 June	7	1036 B.	1626	12 Sept	3
917	1511	31 March	2	977	1569	16 June	5	1037	1627	2 Sept	1
918 B.	1512	19 March	6	978 B.	1570	4 June	2	1038 B.	1628	21 Aug	5
919	1513	9 March	4	979	1571	26 May	7	1039	1629	11 Aug	3
920	1514	26 Feb	1	980	1572	14 May	4	1040	1630	31 July	7
921 B.	1515	16 Feb	5	981 B.	1573	3 May	1	1041 B.	1631	20 July	4
922	1516	5 Feb	3	982	1574	23 April	6	1042	1632	9 July	2
923	1517	24 Jan	7	983	1575	12 April	3	1043	1633	28 June	6
924 B.	1518	13 Jan	4	984 B.	1576	31 March	7	1044 B.	1634	17 June	3
925	1519	3 Jan	2	985	1577	21 March	5	1045	1635	7 June	1
926 B.	1519	23 Dec	6	986 B.	1578	10 March	2	1046 B.	1636	26 May	5
927	1520	12 Dec	4	987	1579	28 Feb	7	1047	1637	16 May	3
928	1521	1 Dec	1	988	1580	17 Feb	4	1048	1638	6 May	7
929 B.	1522	20 Nov	5	989 B.	1581	6 Feb	1	1049 B.	1639	24 April	4
930	1523	10 Nov	3	990	1582	26 Jan	6	1050	1640	13 April	2
931	1524	29 Oct	7	991	1583	15 Jan	3	1051	1641	2 April	6
932 B.	1525	18 Oct	4	992 B.	1584	4 Jan	7	1052 B.	1642	22 March	3
933	1526	8 Oct	2	993	1584	24 Dec	5	1053	1643	12 March	1
934	1527	27 Sept	6	994	1585	13 Dec	2	1054	1644	29 Feb	5
935 B.	1528	16 Sept	3	995 B.	1586	2 Dec	6	1055 B.	1645	17 Feb	2
936	1529	5 Sept	1	996	1587	22 Nov	4	1056	1646	7 Feb	7
937 B.	1530	25 Aug	5	997 B.	1588	10 Nov	1	1057 B.	1647	27 Jan	4
938	1531	16 Aug	3	998	1589	31 Oct	6	1058	1648	17 Jan	2
939	1532	3 Aug	7	999	1590	20 Oct	3	1059	1649	5 Jan	6
940 B.	1533	23 July	4	1000 B.	1591	9 Oct	7	1060 B.	1650	25 Dec	3
941	1534	13 July	2	1001	1592	28 Sept	5	1061	1650	15 Dec	1
942	1535	2 July	6	1002	1593	17 Sept	2	1062	1651	4 Dec	5
943 B.	1536	20 June	3	1003 B.	1594	6 Sept	6	1063 B.	1652	22 Nov	2
944	1537	10 June	1	1004	1595	27 Aug	4	1064	1653	12 Nov	7
945	1538	30 May	5	1005	1596	15 Aug	1	1065	1654	1 Nov	4

HEBRAIC YEAR.	CHRISTIAN ERA.			HEBRAIC YEAR.	CHRISTIAN ERA.			HEBRAIC YEAR.	CHRISTIAN ERA.		
	Year.	Month.	Day.		Year.	Month.	Day.		Year.	Month.	Day.
1066 B.	1655	21 Oct.	1	1120 B.	1714	8 Jan.	4	1156 B.	1772	4 April.	7
1067	1656	10 Oct.	6	1121	1715	27 Dec.	2	1157	1773	25 March	5
1068 B.	1657	29 Sept.	3	1122 B.	1716	16 Dec.	9	1158 B.	1774	14 March	2
1069	1658	19 Sept.	1	1123	1716	5 Dec.	4	1159	1775	4 March	7
1070	1659	8 Sept.	5	1124	1717	24 Nov.	1	1160	1776	21 Feb.	4
1071 B.	1660	27 Aug.	2	1125 B.	1718	13 Nov.	6	1161 B.	1777	9 Feb.	1
1072	1661	17 Aug.	7	1126	1719	3 Nov.	3	1162	1778	30 Jan.	6
1073	1662	6 Aug.	4	1127	1720	22 Oct.	7	1163	1779	19 Jan.	3
1074 B.	1663	26 July.	1	1128 B.	1721	11 Oct.	4	1164 B.	1780	8 Jan.	7
1075	1664	15 July.	6	1129	1721	1 Oct.	2	1165	1780	28 Dec.	5
1076 B.	1665	4 July.	8	1130 B.	1722	29 Sept.	9	1166 B.	1781	17 Dec.	2
1077	1666	24 June.	1	1131	1723	9 Sept.	4	1167	1782	7 Dec.	7
1078	1667	13 June.	5	1132	1723	29 Aug.	1	1168	1783	26 Nov.	4
1079 B.	1668	1 June.	2	1133 B.	1724	18 Aug.	5	1169 B.	1784	14 Nov.	1
1080	1669	22 May.	7	1134	1725	8 Aug.	3	1170	1785	4 Nov.	6
1081	1670	11 May.	4	1135	1725	27 July.	7	1171	1786	24 Oct.	3
1082 B.	1671	30 April.	1	1136 B.	1726	16 July.	4	1172 B.	1787	13 Oct.	7
1083	1672	19 April.	6	1137	1726	6 July.	2	1173	1788	3 Oct.	6
1084	1673	8 April.	3	1138	1727	25 June.	6	1174	1789	21 Sept.	2
1085 B.	1674	28 March.	7	1139 B.	1728	13 June.	3	1175 B.	1790	10 Sept.	6
1086	1675	18 March.	2	1140	1729	2 June.	1	1176	1791	31 Aug.	4
1087 B.	1676	6 March.	9	1141 B.	1730	23 May.	5	1177 B.	1792	19 Aug.	1
1088	1677	24 Feb.	7	1142	1731	12 May.	2	1178	1793	8 Aug.	6
1089	1678	13 Feb.	4	1143	1732	1 May.	7	1179	1794	29 July.	3
1090 B.	1679	2 Feb.	1	1144 B.	1733	29 April.	4	1180 B.	1795	18 July.	7
1091	1680	23 Jan.	6	1145	1734	18 April.	2	1181	1796	7 July.	6
1092	1681	11 Jan.	3	1146	1735	20 March.	8	1182	1797	26 June.	2
1093 B.	1682	31 Dec.	7	1147 B.	1736	18 March.	3	1183 B.	1798	16 June.	6
1094	1683	21 Dec.	3	1148	1737	8 March.	1	1184	1799	6 June.	4
1095	1684	10 Dec.	9	1149	1738	26 Feb.	5	1185	1800	25 May.	1
1096 B.	1685	29 Nov.	6	1150 B.	1739	14 Feb.	2	1186 B.	1801	14 May.	5
1097	1686	18 Nov.	4	1151	1740	4 Feb.	7	1187	1802	4 May.	3
1098 B.	1687	7 Nov.	1	1152 B.	1741	23 Jan.	4	1188 B.	1803	23 April.	7
1099	1688	28 Oct.	6	1153	1742	12 Jan.	2	1189	1804	12 April.	6
1100	1689	16 Oct.	3	1154	1743	2 Jan.	6	1190	1805	1 April.	2
1101 B.	1690	5 Oct.	7	1155 B.	1744	22 Dec.	3	1191 B.	1806	21 March.	6
1102	1691	24 Sept.	5	1156	1745	11 Dec.	1	1192	1807	11 March.	4
1103	1692	14 Sept.	2	1157	1746	20 Nov.	5	1193	1808	26 Feb.	1
1104 B.	1693	2 Sept.	6	1158 B.	1747	19 Nov.	3	1194 B.	1809	16 Feb.	5
1105	1694	23 Aug.	4	1159	1748	9 Nov.	7	1195	1810	6 Feb.	3
1106 B.	1695	12 Aug.	1	1160 B.	1749	8 Nov.	4	1196 B.	1811	26 Jan.	7
1107	1696	2 Aug.	6	1161	1750	29 Oct.	2	1197	1812	16 Jan.	5
1108	1697	21 July.	3	1162	1751	18 Oct.	6	1198	1813	4 Jan.	2
1109 B.	1698	10 July.	7	1163 B.	1752	7 Oct.	3	1199 B.	1814	24 Dec.	6
1110	1699	30 June.	5	1164	1753	26 Sept.	1	1200	1815	14 Dec.	4
1111	1700	19 June.	2	1165	1754	15 Sept.	5	1201	1816	3 Dec.	1
1112 B.	1701	7 June.	9	1166 B.	1755	4 Sept.	2	1202 B.	1817	21 Nov.	5
1113	1702	28 May.	4	1167	1756	25 Aug.	7	1203	1818	11 Nov.	3
1114	1703	17 May.	1	1168	1757	13 Aug.	4	1204	1819	31 Oct.	7
1115 B.	1704	6 May.	6	1169 B.	1758	2 Aug.	1	1205 B.	1820	20 Oct.	4
1116	1705	25 April.	3	1170	1759	23 July.	6	1206	1821	9 Oct.	2
1117 B.	1706	14 April.	7	1171 B.	1760	12 July.	3	1207 B.	1822	28 Sept.	6
1118	1707	4 April.	6	1172	1761	1 July.	1	1208	1823	18 Sept.	4
1119	1708	24 March.	2	1173	1762	29 June.	5	1209	1824	7 Sept.	1
1120 B.	1709	12 March.	6	1174 B.	1763	9 June.	2	1210 B.	1825	26 Aug.	5
1121	1710	2 March.	4	1175	1764	30 May.	7	1211	1826	16 Aug.	3
1122	1711	19 Feb.	1	1176	1765	18 May.	4	1212	1827	5 Aug.	7
1123 B.	1712	8 Feb.	5	1177 B.	1766	7 May.	1	1213 B.	1828	25 July.	4
1124	1713	29 Jan.	3	1178	1767	27 April.	6	1214	1829	14 July.	2
1125	1714	17 Jan.	7	1179	1768	16 April.	3	1215	1830	3 July.	6

HINDU YEAR.	CHRISTIAN ERA.			HINDU YEAR.	CHRISTIAN ERA.			HINDU YEAR.	CHRISTIAN ERA.		
	Year.	Month.	Day.		Year.	Month.	Day.		Year.	Month.	Day.
1246 B.	1830	22 June...	3	1271	1854	24 Sept...	1	1293 B.	1878	5 Jan...	7
1247	1831	12 June...	1	1272	1855	13 Sept...	5	1296	1878	26 Dec...	5
1248 B.	1832	31 May...	5	1273 B.	1856	1 Sept...	2	1297 B.	1879	15 Dec...	2
1249	1833	21 May...	3	1274	1857	22 Aug...	7	1298	1880	4 Dec...	7
1250	1834	10 May...	7	1275	1858	11 Aug...	4	1299	1881	23 Nov...	4
1251 B.	1835	29 April...	4	1276 B.	1859	31 July...	1	1300 B.	1882	12 Nov...	1
1252	1836	18 April...	2	1277	1860	20 July...	6	1301	1883	2 Nov...	6
1253	1837	7 April...	6	1278 B.	1861	9 July...	3	1302	1884	21 Oct...	3
1254 B.	1838	27 March...	3	1279	1862	29 June...	1	1303 B.	1885	10 Oct...	7
1255	1839	17 March...	1	1280	1863	18 June...	5	1304	1886	30 Sept...	5
1256 B.	1840	5 March...	5	1281 B.	1864	6 June...	2	1305	1887	19 Sept...	2
1257	1841	23 Feb...	2	1282	1865	27 May...	7	1306 B.	1888	7 Sept...	6
1258	1842	12 Feb...	7	1283	1866	16 May...	4	1307	1889	28 Aug...	4
1259 B.	1843	1 Feb...	4	1284 B.	1867	5 May...	1	1308 B.	1890	17 Aug...	1
1260	1844	22 Jan...	2	1285	1868	24 April...	6	1309	1891	7 Aug...	6
1261	1845	10 Jan...	6	1286 B.	1869	13 April...	3	1310	1892	26 July...	3
1262 B.	1846	30 Dec...	3	1287	1870	3 April...	1	1311 B.	1893	15 July...	7
1263	1847	20 Dec...	1	1288	1871	23 March...	5	1312	1894	5 July...	5
1264	1847	9 Dec...	5	1289 B.	1872	11 March...	2	1313	1895	24 June...	2
1265 B.	1848	27 Nov...	2	1290	1873	1 March...	7	1314 B.	1896	12 June...	6
1266	1849	17 Nov...	7	1291	1874	29 Feb...	4	1315	1897	2 June...	4
1267 B.	1850	6 Nov...	4	1292 B.	1875	7 Feb...	1	1316 B.	1898	22 May...	1
1268	1851	27 Oct...	2	1293	1876	28 Jan...	6	1317	1899	12 May...	6
1269	1852	15 Oct...	6	1294	1877	16 Jan...	2	1318	1900	1 May...	3
1270 B.	1853	4 Oct...	3								

## NOTE REGARDING THE CHRONOLOGICAL TABLES OF THE HINDU ERA.

In consequence of the want of width in an octavo page, it has been found necessary to break the following table into two parts, instead of exhibiting in one line and view, the whole series of the sidereal and luni-solar years; which would have been more convenient for reference. In other respects the numbers of the several yodanis, &c. remain as stated in the text.

TABLE XIV.—CHRONOLOGICAL ERAE OF THE HINDUS.

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SOLAR YEAR.		PART I.—HINDU SIDEREAL YEARS.										
I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.		
Christian Year.	First day of A.D.	Years beginning on vernal equinox of the sun into Aera of the Hindoos.				Character of the year.	First weekly day of A.D.	Indian Aera and minute of Samvatsara or (C) era of Samvatsara.	Cycles.			
		Kali-yug.	Vikram.	Bengali Aera.	Initial date of all years in March O.S.				Cycle of 4800 years of Yuga-samvatsara, beginning in September.	Initial day in Yuga-samvatsara.	Cycle of 60 Yuga-samvatsara.	Cycle of 60 Yuga-samvatsara (Hindu account).
B. 1600	Tu.	4701	1522	1607	Th. 27	B.	(4) 04 25	776	10	6	43	34
1601	Th.	4702	1523	1608	Sa. 28	B.	(0) 10 6	777	11	6	44	35
1602	Fr.	4703	1524	1609	Sa. 28	B.	(0) 35 27	778	11	7	45	36
1603	Sa.	4704	1525	1610	Mo. 29	B.	(1) 41 8	779	11	8	46	37
B. 1604	Sa.	4705	1526	1611	Tu. 27	B.	(2) 55 40	780	10	9	47	38
1605	Tu.	4706	1527	1612	Th. 28	B.	(4) 12 11	781	10	10	48	39
1606	W.	4707	1528	1613	Fr. 29	B.	(5) 27 42	782	11	11	49	40
1607	Th.	4708	1529	1614	Sa. 28	B.	(6) 42 13	783	11	12	50	41
B. 1608	Fr.	4709	1530	1615	Sa. 27	B.	(0) 58 45	784	10	13	51	42
1609	Sa.	4710	1531	1616	Tu. 28	B.	(2) 14 16	785	10	14	52	43
1610	Mo.	4711	1532	1617	W.	B.	(3) 29 47	786	11	15	53	44
1611	Tu.	4712	1533	1618	Th. 28	B.	(4) 45 18	787	11	16	54	45
B. 1612	W.	4713	1534	1619	Sa. 29	B.	(6) 0 50	788	10	17	55	46
1613	Fr.	4714	1535	1620	Sa. 29	B.	(0) 16 21	789	11	18	56	47
1614	Sa.	4715	1536	1621	Mo. 28	B.	(1) 31 52	790	11	19	57	48
1615	Sa.	4716	1537	1622	Tu. 28	B.	(2) 47 23	791	11	20	58	49
B. 1616	Mo.	4717	1538	1623	Th. 28	B.	(3) 2 34	792	10	21	59	50
1617	W.	4718	1539	1624	Fr. 29	B.	(5) 18 26	793	11	22	60	51
1618	Th.	4719	1540	1625	Sa. 28	B.	(6) 33 57	794	11	23	1	52
1619	Fr.	4720	1541	1626	Sa. 28	B.	(0) 49 28	795	11	24	2	53
B. 1620	Sa.	4721	1542	1627	Tu. 28	B.	(2) 5 0	796	11	25	3	54
1621	Mo.	4722	1543	1628	W.	B.	(3) 20 31	797	11	26	4	55
1622	Tu.	4723	1544	1629	Th. 28	B.	(4) 36 2	798	11	27	5	56
1623	W.	4724	1545	1630	Fr. 29	B.	(5) 51 33	799	11	28	6	57
B. 1624	Th.	4725	1546	1631	Sa. 28	B.	(6) 7 5	800	11	29	7	58
1625	Sa.	4726	1547	1632	Mo. 29	B.	(1) 22 36	801	11	30	8	59
1626	Sa.	4727	1548	1633	Tu. 28	B.	(2) 38 7	802	11	31	9	60
1627	Mo.	4728	1549	1634	W.	B.	(3) 53 38	803	11	32	10	1
B. 1628	Tu.	4729	1550	1635	Fr. 28	B.	(5) 9 10	804	11	33	11	2
1629	Th.	4730	1551	1636	Sa. 28	B.	(6) 24 41	805	11	34	12	3
1630	Fr.	4731	1552	1637	Sa. 28	B.	(0) 40 12	806	11	35	13	4
1631	Sa.	4732	1553	1638	Mo. 29	B.	(1) 55 43	807	11	36	14	5
B. 1632	Sa.	4733	1554	1639	W.	B.	(3) 11 15	808	11	37	15	6
1633	Tu.	4734	1555	1640	Th. 28	B.	(4) 26 46	809	11	38	16	7
1634	W.	4735	1556	1641	Fr. 29	B.	(5) 42 17	810	11	39	17	8
1635	Th.	4736	1557	1642	Sa. 28	B.	(6) 57 48	811	11	40	18	9
B. 1636	Fr.	4737	1558	1643	Mo. 28	B.	(1) 13 20	812	11	41	19	10
1637	Sa.	4738	1559	1644	Tu. 28	B.	(2) 28 51	813	11	42	20	11
1638	Mo.	4739	1560	1645	W.	B.	(3) 44 22	814	11	43	21	12
1639	Tu.	4740	1561	1646	Th. 28	B.	(4) 59 53	815	11	44	22	13
B. 1640	W.	4741	1562	1647	Sa. 28	B.	(6) 15 25	816	11	45	23	14
1641	Fr.	4742	1563	1648	Sa. 28	B.	(0) 30 56	817	11	46	24	15
1642	Sa.	4743	1564	1649	Mo. 29	B.	(1) 46 27	818	11	47	25	16
1643	Sa.	4744	1565	1650	W.	B.	(3) 1 58	819	11	48	26	17
B. 1644	Mo.	4745	1566	1651	Th. 28	B.	(4) 17 30	820	11	49	27	18
1645	W.	4746	1567	1652	Fr. 28	B.	(5) 33 1	821	11	50	28	19
1646	Th.	4747	1568	1653	Sa. 28	B.	(6) 48 32	822	11	51	29	20
1647	Fr.	4748	1569	1654	Mo. 29	B.	(1) 4 3	823	12	52	30	21
B. 1648	Sa.	4749	1570	1655	Tu. 28	B.	(2) 19 35	824	11	53	31	22
1649	Mo.	4750	1571	1656	W.	B.	(3) 35 6	825	11	54	32	23

\* The Faut year of Southern India is two years in advance of the Bengali era; it begins on the 16-16 July, and is now fixed to the latter day. (The table shows the correspondence of Hindu era with European dates.)



SOLAR YEAR.		PART I.—HINDU SIDEREAL YEARS.									
I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	
CHRISTIAN YEAR.	First day of Calda.	Years beginning on entrance of the sun into Aries of the Sidereal Zodiac.				Character of the year.	CYCLES.				
		Kali-yug.	Abda.	Strength was.	Indian date of all days in March A.D.		Cycle of 1000 years of Parasagras, beginning in September.	Actual date in September.	Cycle of Gandaga-vathi.	Cycle of Vrihaspati (Hindu account).	Do. (Hindu account).
A. D.											
1030	Tu.	4751	1572	1067	Th. 28	B.	D. G. P. 4 50 37	826	11	55	33 24
1031	We.	4752	1573	1068	Sa. 29	G.	5 6 8	827	12	56	34 25
B. 1032	Th.	4753	1574	1069	Su. 28	B.	6 21 40	828	11	57	35 26
1033	Sa.	4754	1575	1070	Mo. 28	G.	7 11 11	829	11	58	36 27
1034	Su.	4755	1576	1071	Tu. 29	B.	8 52 43	830	11	59	37 28
1035	Mo.	4756	1577	1072	Th. 29	G.	9 8 13	831	12	60	38 29
B. 1036	Tu.	4757	1578	1073	Fr. 28	B.	10 23 45	832	11	61	39 30
1037	Th.	4758	1579	1074	Sa. 28	G.	11 30 16	833	11	62	40 31
1038	Fr.	4759	1580	1075	Su. 28	B.	12 54 47	834	11	63	41 32
1039	Sa.	4760	1581	1076	Tu. 29	G.	1 19 18	835	12	64	42 33
B. 1040	Su.	4761	1582	1077	We. 29	B.	2 25 53	836	11	65	43 34
1041	Tu.	4762	1583	1078	Th. 29	G.	3 41 21	837	11	66	44 35
1042	We.	4763	1584	1079	Fr. 28	B.	4 50 52	838	11	67	45 36
1043	Th.	4764	1585	1080	Sa. 29	G.	5 32 23	839	12	68	46 37
B. 1044	Fr.	4765	1586	1081	Mo. 28	B.	6 27 53	840	11	69	47 38
1045	Sa.	4766	1587	1082	Tu. 29	G.	7 43 36	841	11	70	48 39
1046	Mo.	4767	1588	1083	We. 29	B.	8 58 57	842	11	71	49 40
1047	Tu.	4768	1589	1084	Th. 29	G.	9 14 28	843	12	72	50 41
B. 1048	We.	4769	1590	1085	Fr. 28	B.	10 39 9	844	11	73	51 42
1049	Th.	4770	1591	1086	Sa. 28	G.	11 45 33	845	11	74	52 43
1050	Fr.	4771	1592	1087	Tu. 29	B.	12 1 2	846	11	75	53 44
1051	Sa.	4772	1593	1088	We. 29	G.	1 16 33	847	12	76	54 45
B. 1052	Mo.	4773	1594	1089	Th. 28	B.	2 32 5	848	11	77	55 46
1053	We.	4774	1595	1090	Fr. 28	G.	3 47 36	849	11	78	56 47
1054	Th.	4775	1596	1091	Sa. 29	B.	4 5 7	850	11	79	57 48
1055	Fr.	4776	1597	1092	Mo. 29	G.	5 16 38	851	12	80	58 49
B. 1056	Sa.	4777	1598	1093	Tu. 28	B.	6 34 10	852	11	81	59 50
1057	Mo.	4778	1599	1094	We. 28	G.	7 49 41	853	11	82	60 51
1058	Tu.	4779	1600	1095	Th. 29	B.	8 6 12	854	12	83	1 52
1059	We.	4780	1601	1096	Sa. 29	G.	9 20 43	855	12	84	2 53
B. 1060	Th.	4781	1602	1097	Su. 28	B.	10 38 13	856	11	85	3 54
1061	Sa.	4782	1603	1098	Mo. 28	G.	11 51 46	857	11	86	4 55
1062	Su.	4783	1604	1099	We. 29	B.	12 7 17	858	12	87	5 56
1063	Mo.	4784	1605	1100	Th. 29	G.	1 25 48	859	12	88	6 57
B. 1064	Tu.	4785	1606	1101	Fr. 28	B.	2 39 20	860	11	89	7-8 58
1065	Th.	4786	1607	1102	Sa. 28	G.	3 52 51	861	11	90	9 59
1066	Fr.	4787	1608	1103	Mo. 29	B.	4 6 22	862	12	1	10 60
1067	Sa.	4788	1609	1104	Tu. 29	G.	5 24 23	863	12	2	11 1
B. 1068	Su.	4789	1610	1105	We. 28	B.	6 40 25	864	11	3	12 2
1069	Tu.	4790	1611	1106	Th. 28	G.	7 55 55	865	11	4	13 3
1070	We.	4791	1612	1107	Sa. 29	B.	8 11 27	866	12	5	14 4
1071	Th.	4792	1613	1108	Su. 29	G.	9 26 58	867	12	6	15 5
B. 1072	Fr.	4793	1614	1109	Mo. 28	B.	10 42 30	868	11	7	16 6
1073	Sa.	4794	1615	1110	Tu. 28	G.	11 58 1	869	11	8	17 7
1074	Mo.	4795	1616	1111	Th. 29	B.	12 13 32	870	12	9	18 8
1075	Tu.	4796	1617	1112	Fr. 29	G.	1 29 3	871	12	10	19 9
B. 1076	We.	4797	1618	1113	Sa. 28	B.	2 44 35	872	11	11	20 10
1077	Th.	4798	1619	1114	Mo. 29	G.	3 6 6	873	11	12	21 11
1078	Sa.	4799	1620	1115	Tu. 29	B.	4 15 37	874	12	13	22 12
1079	Su.	4800	1621	1116	We. 29	G.	5 31 9	875	12	14	23 13



SOLAR YEAR.		PART I.—HINDU SIDEREAL YEARS.										
L.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.		
CHRISTIAN YEAR.	First day of date.	Years beginning on various days of the Sun into Ardra of the sidereal Zodiac.				Consistent of the year.	First weekly day of date.	CYCLES.				
		Kali-yug.	Vikra.	Shalivah.	Local date of all three in March A.D.			Cycle of 1000 Years of Parvati, beginning in September.	Initial date in September.	Cycle of Gautham-vikra.	Cycle of Vrihaspati (Jyotish account).	No. of years (Jyotish account).
A. D.												
B. 1700	Mo.	1601	1622	1107	Th. 29	B.	P. 45 40	876	19	16	24	14
1701	We.	1602	1623	1108	Sa. 29	B.	(0) 3 11	877	12	10	25	15
1702	Th.	1603	1624	1109	Sa. 29	B.	(0) 17 42	878	13	17	26	16
1703	Fr.	1604	1625	1110	Mo. 30	B.	(1) 13 13	879	19	18	27	17
B. 1704	Sa.	1605	1626	1111	Tu. 29	B.	(2) 49 45	880	22	19	28	18
1705	Mo.	1606	1627	1112	Th. 29	B.	(4) 4 16	881	12	20	29	19
1706	Tu.	1607	1628	1113	Fr. 29	B.	(5) 19 47	882	13	21	30	20
1707	We.	1608	1629	1114	Sa. 30	B.	(6) 35 18	883	18	22	31	21
B. 1708	Th.	1609	1630	1115	Sa. 29	B.	(0) 50 50	884	12	23	32	22
1709	Sa.	1610	1631	1116	Tu. 29	B.	(2) 6 31	885	12	24	33	23
1710	Sa.	1611	1632	1117	We. 29	B.	(2) 21 42	886	12	25	34	24
1711	Mo.	1612	1633	1118	Th. 30	B.	(4) 37 13	887	14	26	35	25
B. 1712	Tu.	1613	1634	1119	Fr. 29	B.	(5) 52 54	888	12	27	36	26
1713	Th.	1614	1635	1120	Sa. 29	B.	(0) 8 26	889	13	28	37	27
1714	Fr.	1615	1636	1121	Mo. 29	B.	(1) 23 37	890	18	29	38	28
1715	Sa.	1616	1637	1122	Tu. 30	B.	(2) 39 58	891	13	30	39	29
B. 1716	Sa.	1617	1638	1123	We. 29	B.	(2) 55 0	892	12	31	40	30
1717	Th.	1618	1639	1124	Fr. 29	B.	(5) 10 31	893	13	32	41	31
1718	We.	1619	1640	1125	Sa. 29	B.	(0) 26 3	894	12	33	42	32
1719	Th.	1620	1641	1126	Sa. 30	B.	(0) 41 34	895	13	34	43	33
B. 1720	Fr.	1621	1642	1127	Mo. 29	B.	(1) 57 6	896	12	35	44	34
1721	Sa.	1622	1643	1128	We. 29	B.	(2) 12 38	897	13	36	45	35
1722	Mo.	1623	1644	1129	Th. 29	B.	(4) 28 7	898	13	37	46	36
1723	Tu.	1624	1645	1130	Fr. 30	B.	(5) 43 38	899	13	38	47	37
B. 1724	We.	1625	1646	1131	Sa. 29	B.	(6) 59 10	900	12	39	48	38
1725	Fr.	1626	1647	1132	Mo. 29	B.	(1) 14 41	901	12	40	49	39
1726	Sa.	1627	1648	1133	Tu. 30	B.	(2) 30 12	902	13	41	50	40
1727	Sa.	1628	1649	1134	We. 30	B.	(3) 45 43	903	13	42	51	41
B. 1728	Mo.	1629	1650	1135	Fr. 29	B.	(5) 1 14	904	12	43	52	42
1729	We.	1630	1651	1136	Sa. 29	B.	(6) 16 46	905	15	44	53	43
1730	Th.	1631	1652	1137	Sa. 30	B.	(0) 32 17	906	13	45	54	44
1731	Fr.	1632	1653	1138	Mo. 30	B.	(1) 47 48	907	13	46	55	45
B. 1732	Sa.	1633	1654	1139	We. 29	B.	(3) 3 20	908	13	47	56	46
1733	Mo.	1634	1655	1140	Th. 29	B.	(4) 18 51	909	13	48	57	47
1734	Tu.	1635	1656	1141	Fr. 30	B.	(5) 34 22	910	13	49	58	48
1735	We.	1636	1657	1142	Sa. 30	B.	(6) 49 53	911	13	50	59	49
B. 1736	Th.	1637	1658	1143	Mo. 29	B.	(1) 5 24	912	13	51	60	50
1737	Sa.	1638	1659	1144	Tu. 29	B.	(2) 20 56	913	13	52	1	51
1738	Sa.	1639	1660	1145	We. 30	B.	(3) 36 27	914	13	53	2	52
1739	Mo.	1640	1661	1146	Th. 30	B.	(4) 51 58	915	13	54	3	53
B. 1740	Tu.	1641	1662	1147	Sa. 30	B.	(5) 7 30	916	13	55	4	54
1741	Th.	1642	1663	1148	Sa. 29	B.	(0) 23 1	917	13	56	5	55
1742	Fr.	1643	1664	1149	Mo. 29	B.	(1) 38 32	918	13	57	6	56
1743	Sa.	1644	1665	1150	Tu. 29	B.	(2) 54 3	919	13	58	7	57
B. 1744	Sa.	1645	1666	1151	Th. 30	B.	(4) 9 35	920	13	59	8	58
1745	Tu.	1646	1667	1152	Fr. 30	B.	(5) 25 6	921	13	60	9	59
1746	We.	1647	1668	1153	Sa. 29	B.	(6) 40 37	922	13	61	10	60
1747	Th.	1648	1669	1154	Sa. 29	B.	(0) 56 8	923	13	62	11	1
B. 1748	Fr.	1649	1670	1155	Tu. 30	B.	(2) 11 40	924	13	63	12	2
1749	Sa.	1650	1671	1156	We. 29	B.	(3) 27 11	925	13	64	13	3

SOLAR YEAR.		PART I.—HINDU SOLAR YEAR.										
I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.		
CHALDEAN YEAR.	First day of time.	Years beginning on entrance of the Sun into Aries of the Indian Calendar.				Character of the year.	First weekly day of date.	Indian year and month of beginning, or of termination, according to the computation.	CYCLES.			
A. D.		Kali-yuga.	Vikram.	Sengali sam.	Initial date of all time in April 5. 9.				Cycle of 3000 years at Parauranic, beginning in September.	Initial date in Sep. samant.	Cycle of Grahana-yuga.	Cycle of Yuga-samant, (jugal account).
1750	Mo.	4851	1673	1157	Th. 29	(6)	62 82	926	13	65	14	4
1751	Tu.	4852	1673	1158	Fr. 9	(5)	63 83	927	13	66	15	5
B. 1752	We.	4853	1674	1159	Sa. 9	(4)	64 84	928	13	67	16	6
1753	Th.	4854	1675	1160	Mo. 9	(3)	65 85	929	13	68	17	7
1754	Fr.	4855	1676	1161	Tu. 9	(2)	66 86	930	13	69	18	8
1755	Sa.	4856	1677	1162	Th. 10	(1)	67 87	931	13	70	19	9
B. 1756	Mo.	4857	1678	1163	Fr. 9	(0)	68 88	932	13	71	20	10
1757	We.	4858	1679	1164	Sa. 9	(0)	69 89	933	13	72	21	11
1758	Th.	4859	1680	1165	Sa. 9	(0)	70 90	934	13	73	22	12
1759	Fr.	4860	1681	1166	Tu. 10	(0)	71 91	935	13	74	23	13
B. 1760	Sa.	4861	1682	1167	We. 9	(0)	72 92	936	13	75	24	14
1761	Mo.	4862	1683	1168	Th. 9	(0)	73 93	937	13	76	25	15
1762	Tu.	4863	1684	1169	Fr. 9	(0)	74 94	938	13	77	26	16
1763	We.	4864	1685	1170	Sa. 10	(0)	75 95	939	13	78	27	17
B. 1764	Th.	4865	1686	1171	Mo. 9	(0)	76 96	940	13	79	28	18
1765	Sa.	4866	1687	1172	Tu. 9	(0)	77 97	941	13	80	29	19
1766	Mo.	4867	1688	1173	We. 9	(0)	78 98	942	13	81	30	20
1767	Mo.	4868	1689	1174	Fr. 10	(0)	79 99	943	13	82	31	21
B. 1768	Tu.	4869	1690	1175	Sa. 9	(0)	80 00	944	13	83	32	22
1769	Th.	4870	1691	1176	Sa. 9	(0)	81 01	945	13	84	33	23
1770	Fr.	4871	1692	1177	Mo. 9	(0)	82 02	946	13	85	34	24
1771	Sa.	4872	1693	1178	We. 10	(0)	83 03	947	13	86	35	25
B. 1772	Sa.	4873	1694	1179	Th. 9	(0)	84 04	948	13	87	36	26
1773	Tu.	4874	1695	1180	Fr. 9	(0)	85 05	949	13	88	37	27
1774	We.	4875	1696	1181	Sa. 9	(0)	86 06	950	13	89	38	28
1775	Th.	4876	1697	1182	Mo. 10	(0)	87 07	951	13	90	39	29
B. 1776	Fr.	4877	1698	1183	Tu. 9	(0)	88 08	952	13	91	40	30
1777	Sa.	4878	1699	1184	We. 9	(0)	89 09	953	13	92	41	31
1778	Mo.	4879	1700	1185	Th. 9	(0)	90 10	954	13	93	42	32
1779	Tu.	4880	1701	1186	Sa. 10	(0)	91 11	955	13	94	43	33
B. 1780	We.	4881	1702	1187	Sa. 9	(0)	92 12	956	13	95	44	34
1781	Fr.	4882	1703	1188	Mo. 9	(0)	93 13	957	13	96	45	35
1782	Sa.	4883	1704	1189	Tu. 9	(0)	94 14	958	13	97	46	36
1783	Sa.	4884	1705	1190	Th. 10	(0)	95 15	959	13	98	47	37
B. 1784	Mo.	4885	1706	1191	Fr. 9	(0)	96 16	960	13	99	48	38
1785	We.	4886	1707	1192	Sa. 9	(0)	97 17	961	13	100	49	39
1786	Tu.	4887	1708	1193	Mo. 10	(0)	98 18	962	13	101	50	40
1787	Fr.	4888	1709	1194	Tu. 10	(0)	99 19	963	13	102	51	41
B. 1788	Sa.	4889	1710	1195	We. 9	(0)	100 20	964	13	103	52	42
1789	Mo.	4890	1711	1196	Th. 9	(0)	101 21	965	13	104	53	43
1790	Tu.	4891	1712	1197	Sa. 10	(0)	102 22	966	13	105	54	44
1791	We.	4892	1713	1198	Sa. 10	(0)	103 23	967	13	106	55	45
B. 1792	Th.	4893	1714	1199	Mo. 9	(0)	104 24	968	13	107	56	46
1793	Sa.	4894	1715	1200	Tu. 9	(0)	105 25	969	13	108	57	47
1794	Sa.	4895	1716	1201	Th. 10	(0)	106 26	970	13	109	58	48
1795	Mo.	4896	1717	1202	Fr. 10	(0)	107 27	971	13	110	59	49
B. 1796	Tu.	4897	1718	1203	Sa. 9	(0)	108 28	972	13	111	60	50
1797	Th.	4898	1719	1204	Sa. 9	(0)	109 29	973	13	112	61	51
1798	Fr.	4899	1720	1205	Tu. 10	(0)	110 30	974	13	113	62	52
1799	Sa.	4900	1721	1206	We. 10	(0)	111 31	975	13	114	63	53

SOLAR YEAR.		PART I.—HINDU SIDEREAL YEARS.									
I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	
CHRISTIAN YEAR. A. D.	First day of A.M.	Years beginning on entrance of the Sun into Aries of the Sidereal Zodiac.				Character of the year. First weekly day of A.M. Indian hour and minute of Sakrabat, or (24 hrs. = constellation) V.	Cycles.				
		Samvat.	Vikram.	Samvat B.S.	Initial date of A.M. (day in April) N. S.		Cycle of 100 years of Panchanga, beginning in Aries.	Initial date in September.	Cycle of 100 years of Vrihaspati (temporal second).	Cycle of 100 years of Vrihaspati (temporal second).	Do. (Time account.)
B. 1800	Sa.	4901	1732	1297	Th. 10	R. (4) 35 46	975	14	25	6	54
1801	Tu.	4902	1733	1298	Fr. 10	R. (5) 34 16	977	14	26	6	53
1802	We.	4903	1734	1299	Sa. 11	R. (6) 9 47	978	15	27	7	50
1803	Th.	4904	1735	1300	Mo. 11	R. (7) 25 18	979	15	28	8	57
B. 1804	Fr.	4905	1736	1301	Tu. 10	R. (8) 40 50	980	14	29	9	58
1805	Sa.	4906	1737	1302	We. 10	R. (9) 56 21	981	14	30	10	59
1806	Mo.	4907	1738	1303	Th. 11	R. (10) 11 32	982	15	31	11	60
1807	Tu.	4908	1739	1304	Sa. 11	R. (11) 27 23	983	15	32	12	1
B. 1808	We.	4909	1740	1305	Sa. 10	R. (12) 42 55	984	14	33	13	2
1809	Fr.	4910	1741	1306	Mo. 10	R. (1) 58 26	985	14	34	14	3
1810	Sa.	4911	1742	1307	We. 11	R. (2) 13 47	986	15	35	15	4
1811	Su.	4912	1743	1308	Th. 11	R. (3) 29 28	987	15	36	16	5
B. 1812	Mo.	4913	1744	1309	Fr. 10	R. (4) 45 9	988	14	37	17	6
1813	We.	4914	1745	1310	Sa. 11	R. (5) 0 31	989	14	38	18	7
1814	Th.	4915	1746	1311	Mo. 11	R. (6) 16 2	990	15	39	19	8
1815	Fr.	4916	1747	1312	Tu. 11	R. (7) 31 23	991	15	40	20	9
B. 1816	Sa.	4917	1748	1313	We. 10	R. (8) 47 3	992	14	41	21	10
1817	Mo.	4918	1749	1314	Fr. 11	R. (9) 2 36	993	14	42	22	11
1818	Tu.	4919	1750	1315	Sa. 11	R. (10) 18 7	994	15	43	23	12
1819	We.	4920	1751	1316	Sa. 11	R. (11) 33 28	995	15	44	24	13
B. 1820	Th.	4921	1752	1317	Mo. 10	R. (12) 49 10	996	14	45	25	14
1821	Sa.	4922	1753	1318	We. 11	R. (1) 4 41	997	15	46	26	15
1822	Su.	4923	1754	1319	Th. 11	R. (2) 20 12	998	15	47	27	16
1823	Mo.	4924	1755	1320	Fr. 11	R. (3) 35 43	999	15	48	28	17
B. 1824	Tu.	4925	1756	1321	Sa. 10	R. (4) 51 13	1000	14	49	29	18
1825	Th.	4926	1757	1322	Mo. 11	R. (5) 6 46	1	15	50	30	19
1826	Fr.	4927	1758	1323	Tu. 11	R. (6) 22 17	2	15	51	31	20
1827	Sa.	4928	1759	1324	We. 11	R. (7) 37 48	3	16	52	32	21
B. 1828	Su.	4929	1760	1325	Th. 10	R. (8) 53 20	4	14	53	33	22
1829	Tu.	4930	1761	1326	Sa. 11	R. (9) 8 51	5	15	54	34	23
1830	We.	4931	1762	1327	Sa. 11	R. (10) 24 22	6	15	55	35	24
1831	Th.	4932	1763	1328	Mo. 11	R. (11) 39 53	7	16	56	36	25
B. 1832	Fr.	4933	1764	1329	Tu. 10	R. (12) 55 23	8	14	57	37	26
1833	Sa.	4934	1765	1330	Th. 11	R. (1) 10 50	9	15	58	38	27
1834	Mo.	4935	1766	1331	Fr. 11	R. (2) 26 27	10	15	59	39	28
1835	Tu.	4936	1767	1332	Sa. 11	R. (3) 41 58	11	15	60	40	29
B. 1836	We.	4937	1768	1333	Sa. 10	R. (4) 57 30	12	14	61	41	30
1837	Fr.	4938	1769	1334	Tu. 11	R. (5) 13 1	13	15	62	42	31
1838	Sa.	4939	1769	1335	We. 11	R. (6) 28 32	14	15	63	43	32
1839	Su.	4940	1761	1336	Th. 11	R. (7) 44 3	15	15	64	44	33
B. 1840	Mo.	4941	1762	1337	Fr. 10	R. (8) 59 35	16	14	65	45	34
1841	We.	4942	1763	1338	Sa. 11	R. (9) 15 6	17	15	66	46	35
1842	Th.	4943	1764	1339	Mo. 11	R. (10) 30 37	18	15	67	47	36
1843	Fr.	4944	1765	1340	Tu. 11	R. (11) 46 8	19	15	68	48	37
B. 1844	Sa.	4945	1766	1331	Th. 11	R. (12) 1 40	20	14	69	49	38
1845	Mo.	4946	1767	1332	Fr. 11	R. (1) 17 14	21	15	70	50	39
1846	Tu.	4947	1768	1333	Sa. 11	R. (2) 32 42	22	15	71	51	40
1847	We.	4948	1769	1334	Sa. 11	R. (3) 48 13	23	15	72	52	41
B. 1848	Th.	4949	1770	1335	Tu. 11	R. (4) 63 45	24	15	73	53	42
1849	Sa.	4950	1771	1336	We. 11	R. (5) 19 16	25	15	74	54	43

SOLAR YEAR.		PART I.—HINDU MINERAL YEARS.										
I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.		
CURRENT YEAR. A. D.	First day of diffn.	Years beginning on entrance of the Sun into Aries of the Sidereal Zodiac.				Character of the year. First weekly day of diffn. Indian hour and minute of beginning, or, vice versa, termination.	CYCLES.					
		Kaliyug.	Vikram.	Samvat.	Local date of all these in April, 1856.		Cycle of 100 years of Vikramabindu, beginning in September.	Local date in September.	Cycle of Vaisakhe-ritika.	Cycle of Vileshpati, (fiscal account.)	Do. (Amal account.)	
1850	Sa.	4031	1772	1237	Th. 11	23. G. P.						
1851	Mo.	4032	1773	1238	Fr. 11	(4) 34 47	26	13	75	55	44	
B. 1852	Tu.	4033	1774	1239	Sa. 11	(5) 50 19	27	15	70	56	45	
1853	Th.	4034	1775	1240	Mo. 11	(0) 0 50	28	13	77	57	46	
1854	Fr.	4035	1776	1241	Tu. 11	(1) 31 21	29	15	78	58	47	
1855	Sa.	4036	1777	1242	We. 11	(2) 36 52	30	15	79	59	48	
B. 1856	Sa.	4037	1778	1243	Th. 11	(3) 52 23	31	15	80	60	49	
1857	Tu.	4038	1779	1244	Sa. 11	(5) 7 55	32	15	81	1-2	50	
1858	We.	4039	1780	1245	Sa. 11	(6) 23 20	33	15	82	3	51	
1859	Th.	4040	1781	1246	Mo. 11	(0) 38 57	34	15	83	4	52	
B. 1860	Fr.	4041	1782	1247	We. 11	(1) 54 28	35	15	84	5	53	
1861	Sa.	4042	1783	1248	Th. 11	(2) 10 0	36	15	85	6	54	
1862	Mo.	4043	1784	1249	Fr. 11	(3) 25 34	37	15	86	7	55	
1863	Tu.	4044	1785	1250	Sa. 11	(4) 31 3	38	15	87	8	56	
B. 1864	We.	4045	1786	1251	Mo. 11	(5) 46 33	39	15	88	9	57	
1865	Th.	4046	1787	1252	Tu. 11	(0) 12 5	40	15	89	10	58	
1866	Fr.	4047	1788	1253	We. 11	(1) 27 36	41	15	90	11	59	
1867	Sa.	4048	1789	1254	Th. 11	(2) 43 7	42	15	1	12	60	
B. 1868	Mo.	4049	1790	1255	Sa. 11	(3) 58 38	43	15	2	13	1	
1869	We.	4050	1791	1256	Mo. 11	(4) 14 10	44	15	3	14	2	
1870	Th.	4051	1792	1257	We. 11	(5) 20 41	45	15	4	15	3	
1871	Fr.	4052	1793	1258	Th. 11	(0) 44 12	46	15	5	16	4	
B. 1872	Sa.	4053	1794	1259	Fr. 11	(1) 16 15	47	15	6	17	5	
1873	Mo.	4054	1795	1260	Tu. 11	(2) 31 46	48	15	7	18	6	
1874	Tu.	4055	1796	1261	We. 11	(3) 47 17	49	15	8	19	7	
1875	We.	4056	1797	1262	Th. 11	(4) 2 48	50	15	9	20	8	
B. 1876	Th.	4057	1798	1263	Mo. 11	(5) 18 29	51	15	10	21	9	
1877	Sa.	4058	1799	1264	We. 11	(0) 33 51	52	15	11	22	10	
1878	Sa.	4059	1800	1265	Th. 11	(1) 49 32	53	15	12	23	11	
1879	Mo.	4060	1801	1266	Sa. 11	(2) 5 43	54	15	13	24	12	
B. 1880	Tu.	4061	1802	1267	Sa. 11	(3) 20 25	55	15	14	25	13	
1881	Th.	4062	1803	1268	Mo. 11	(4) 35 56	56	15	15	26	14	
1882	Fr.	4063	1804	1269	Tu. 11	(5) 51 27	57	15	16	27	15	
1883	Sa.	4064	1805	1270	Th. 11	(0) 6 58	58	15	17	28	16	
B. 1884	Sa.	4065	1806	1271	Fr. 11	(1) 22 30	59	15	18	29	17	
1885	Tu.	4066	1807	1272	Sa. 11	(2) 38 1	60	15	19	30	18	
1886	We.	4067	1808	1273	Sa. 11	(3) 53 32	61	15	20	31	19	
1887	Th.	4068	1809	1274	Tu. 11	(4) 9 3	62	15	21	32	20	
B. 1888	Fr.	4069	1810	1275	We. 11	(5) 24 35	63	15	22	33	21	
1889	Sa.	4070	1811	1276	Th. 11	(0) 40 6	64	15	23	34	22	
1890	Mo.	4071	1812	1277	Fr. 11	(1) 55 37	65	15	24	35	23	
1891	Tu.	4072	1813	1278	Sa. 11	(2) 11 8	66	15	25	36	24	
B. 1892	We.	4073	1814	1279	Mo. 11	(3) 26 49	67	15	26	37	25	
1893	Th.	4074	1815	1280	Tu. 11	(4) 42 11	68	15	27	38	26	
1894	Sa.	4075	1816	1281	We. 11	(5) 57 42	69	15	28	39	27	
1895	Sa.	4076	1817	1282	Th. 11	(0) 13 13	70	15	29	40	28	
B. 1896	Mo.	4077	1818	1283	Sa. 11	(1) 28 45	71	15	30	41	29	
1897	We.	4078	1819	1284	Sa. 11	(2) 44 16	72	15	31	42	30	
1898	Th.	4079	1820	1285	Mo. 11	(3) 59 47	73	15	32	43	31	
1899	Fr.	4080	1821	1286	We. 11	(4) 15 18	74	15	33	44	32	
1900	Sa.	4081	1822	1287	Th. 11	(5) 30 15	75	15	34	45	33	
						(0) 46 16	76	15	35	46	34	

PART II.—LUNI-SOLAR YEAR.												
I.	XII.		XIII.	XIV.	XV.	XVI.	XVII. XVIII.		XIX.			
CHRISTIAN YEAR— A.D.	Kaliyug.	Samvat.	Year of the Hindu Era.	Character of the year, and of the lunar month.	Year of the Hindu Era.	Year of the Hindu Era.	Year of the Hindu Era.	Year of the Hindu Era.	Year of the Hindu Era.	Year of the Hindu Era.	Year of the Hindu Era.	Year of the Hindu Era.
B. 1000.	4701	1657	1008	A.S.	W. 5 Mar.	8	30	2143	962	47	8 Feb.	
1001	4702	1658	1009		Mo. 23 Mar.	26	50	2144	963	48	23 Jan.	
1002	4703	1659	1010		Sa. 11 Mar.	16	30	2145	964	49	18 Jan.	
1003	4704	1660	1011	A.A.	W. 2 Mar.	6	31	2146	965	40	31 Jan.	
B. 1004	4705	1661	1012		Tu. 20 Mar.	23	30	2147	966	41	21 Jan.	
1005	4706	1662	1013		Sa. 8 Mar.	13	50	2148	967	42	7 Feb.	
1006	4707	1663	1014	A.V.	Th. 27 Feb.	2	30	2149	968	43	28 Jan.	
1007	4708	1664	1015		W. 19 Mar.	21	31	2150	969	44	18 Jan.	
B. 1008	4709	1665	1016	A.B.	Mo. 6 Mar.	9	30	2151	970	45	8 Feb.	
1009	4710	1666	1017		Sa. 25 Mar.	28	50	2152	971	46	25 Jan.	
1010	4711	1667	1018		W. 14 Mar.	17	30	2153	972	47	14 Jan.	
1011	4712	1668	1019	A.S.	Mo. 4 Mar.	7	31	2154	973	48	3 Feb.	
B. 1012	4713	1669	1020		Sa. 23 Mar.	25	30	2155	974	49	23 Jan.	
1013	4714	1670	1021		Th. 11 Mar.	14	30	2156	975	50	9 Feb.	
1014	4715	1671	1022	A.J.	Mo. 28 Feb.	3	31	2157	976	51	29 Jan.	
1015	4716	1672	1023		Sa. 19 Mar.	23	31	2158	977	52	19 Jan.	
B. 1016	4717	1673	1024	A.C.	Fr. 8 Mar.	11	30	2159	978	53	7 Feb.	
1017	4718	1674	1025		W. 26 Mar.	29	30	2160	979	54	26 Jan.	
1018	4719	1675	1026		Mo. 13 Mar.	19	31	2161	980	55	15 Jan.	
1019	4720	1676	1027	A.S.	Fr. 3 Mar.	8	31	2162	981	56	3 Feb.	
B. 1020	4721	1677	1028		Th. 23 Mar.	25	30	2163	982	57	24 Jan.	
1021	4722	1678	1029		Mo. 12 Mar.	15	30	2164	983	58	10 Feb.	
1022	4723	1679	1030	A.A.	Sa. 2 Mar.	5	31	2165	984	59	31 Jan.	
1023	4724	1680	1031		Fr. 21 Mar.	24	31	2166	985	60	21 Jan.	
B. 1024	4725	1681	1032		Tu. 9 Mar.	12	30	2167	986	1	8 Feb.	
1025	4726	1682	1033	A.V.	Sa. 26 Feb.	1	30	2168	987	2	27 Jan.	
1026	4727	1683	1034		Fr. 17 Mar.	20	31	2169	988	3	17 Jan.	
1027	4728	1684	1035	A.B.	W. 7 Mar.	9	30	2170	989	4	6 Feb.	
B. 1028	4729	1685	1036		Tu. 25 Mar.	28	30	2171	990	5	26 Jan.	
1029	4730	1686	1037		Sa. 14 Mar.	17	30	2172	991	6	14 Jan.	
1030	4731	1687	1038	A.S.	W. 3 Mar.	6	31	2173	992	7	1 Feb.	
1031	4732	1688	1039		Tu. 23 Mar.	24	30	2174	993	8	22 Jan.	
B. 1032	4733	1689	1040		Sa. 11 Mar.	14	30	2175	994	9	10 Feb.	
1033	4734	1690	1041	A.J.	Th. 28 Feb.	3	30	2176	995	10	29 Jan.	
1034	4735	1691	1042		W. 19 Mar.	23	31	2177	996	11	19 Jan.	
1035	4736	1692	1043	A.C.	Sa. 8 Mar.	13	30	2178	997	12	6 Feb.	
B. 1036	4737	1693	1044		Sa. 26 Feb.	23	30	2179	998	13	27 Jan.	
1037	4738	1694	1045		Th. 16 Mar.	19	30	2180	999	14	16 Jan.	
1038	4739	1695	1046	A.S.	Mo. 5 Mar.	8	31	2181	1000	15	3 Feb.	
1039	4740	1696	1047		Sa. 24 Mar.	26	30	2182	1001	16	24 Jan.	
B. 1040	4741	1697	1048		Th. 13 Mar.	15	30	2183	1002	17	13 Jan.	
1041	4742	1698	1049	A.A.	Tu. 2 Mar.	5	31	2184	1003	18	31 Jan.	
1042	4743	1699	1050		Sa. 20 Mar.	23	31	2185	1004	19	30 Jan.	
1043	4744	1700	1051		Fr. 10 Mar.	12	30	2186	1005	20	8 Feb.	
B. 1044	4745	1701	1052	A.V.	Th. 27 Feb.	1	30	2187	1006	21	28 Jan.	
1045	4746	1702	1053		Mo. 17 Mar.	20	31	2188	1007	22	17 Jan.	
1046	4747	1703	1054	A.B.	Fr. 6 Mar.	9	31	2189	1008	23	4 Feb.	
1047	4748	1704	1055		Th. 25 Mar.	27	30	2190	1009	24	25 Jan.	
B. 1048	4749	1705	1056		Tu. 14 Mar.	17	30	2191	1010	25	15 Jan.	
1049	4750	1706	1057	A.S.	Sa. 3 Mar.	6	31	2192	1011	26	1 Feb.	

(This table includes the Persian luni-solar era, which commences with the Hindu, and the Chinese, which begins one year earlier.) The Vikramt era commences one year earlier with the Hindu, but its divisions are solar, being the same as ours. The latter A.D. 1000, after which it is day earlier than the latter.

PART II.—LUNI-SOLAR YEAR.											
I.	XII.		XIII.	XIV.	XV.	XVI.	XVII.	XVIII.	XIX.		
ENGLISH YEAR.	Sanskrit.		Arabic.		Hindu.		Chinese.		Persian.		
A. D.	Year.	Month.	Year.	Month.	Year.	Month.	Year.	Month.	Year.	Month.	
1650	1751	1707	1658		Fr. 23 Mar.	24	20	2103	1612	27	
1651	1752	1708	1659		Tu. 11 Mar.	13	20	2104	1613	28	
B. 1652	1753	1709	1660	A. J.	Sa. 29 Feb.	3	20	2105	1614	29	
1653	1754	1710	1661		Sa. 10 Mar.	22	31	2106	1615	30	
1654	1755	1711	1662	A. C.	We. 3 Mar.	10	30	2107	1616	31	
1655	1756	1712	1663		Tu. 27 Mar.	29	30	2108	1617	32	
B. 1656	1757	1713	1664		Sa. 16 Mar.	18	30	2109	1618	33	
1657	1758	1714	1665	A. S.	Th. 5 Mar.	8	31	2110	1619	34	
1658	1759	1715	1666		Tu. 23 Mar.	25	30	2111	1620	35	
1659	1760	1716	1667		Sa. 14 Mar.	15	30	2112	1621	36	
B. 1660	1761	1717	1668	A. A.	Th. 1 Mar.	4	30	2113	1622	37	
1661	1762	1718	1669		We. 20 Mar.	23	31	2114	1623	38	
1662	1763	1719	1670		Sa. 9 Mar.	11	30	2115	1624	39	
1663	1764	1720	1671	A. Y.	Th. 29 Feb.	1	30	2116	1625	40	
B. 1664	1765	1721	1672		Th. 17 Mar.	20	30	2117	1626	41	
1665	1766	1722	1673	A. B.	Mo. 6 Mar.	9	31	2118	1627	42	
1666	1767	1723	1674		Sa. 24 Mar.	27	30	2119	1628	43	
1667	1768	1724	1675		Tu. 14 Mar.	16	30	2120	1629	44	
B. 1668	1769	1725	1676	A. S.	Tu. 4 Mar.	5	31	2121	1630	45	
1669	1770	1726	1677		Mo. 22 Mar.	23	31	2122	1631	46	
1670	1771	1727	1678		Fr. 11 Mar.	13	30	2123	1632	47	
1671	1772	1728	1679	A. J.	Tu. 28 Feb.	2	30	2124	1633	48	
B. 1672	1773	1729	1680		Mo. 18 Mar.	21	31	2125	1634	49	
1673	1774	1730	1681	A. C.	Sa. 8 Mar.	11	31	2126	1635	50	
1674	1775	1731	1682		Fr. 27 Mar.	29	30	2127	1636	51	
1675	1776	1732	1683		Tu. 16 Mar.	16	30	2128	1637	52	
B. 1676	1777	1733	1684	A. S.	Sa. 4 Mar.	7	31	2129	1638	53	
1677	1778	1734	1685		Fr. 23 Mar.	26	31	2130	1639	54	
1678	1779	1735	1686		We. 13 Mar.	15	30	2131	1640	55	
1679	1780	1736	1687	A. A.	Sa. 2 Mar.	4	30	2132	1641	56	
B. 1680	1781	1737	1688		Sa. 20 Mar.	23	31	2133	1642	57	
1681	1782	1738	1689	A. J. A.	We. 9 Mar.	11	30	2134	1643	58	
1682	1783	1739	1690		Tu. 23 Mar.	30	30	2135	1644	59	
1683	1784	1740	1691		Sa. 17 Mar.	19	30	2136	1645	60	
B. 1684	1785	1741	1692	A. B.	Th. 6 Mar.	9	31	2137	1646	61	
1685	1786	1742	1693		We. 25 Mar.	27	30	2138	1647	62	
1686	1787	1743	1694		Sa. 14 Mar.	16	30	2139	1648	63	
1687	1788	1744	1695	A. A.	Th. 2 Mar.	5	30	2140	1649	64	
B. 1688	1789	1745	1696		We. 21 Mar.	24	31	2141	1650	65	
1689	1790	1746	1697		Mo. 11 Mar.	13	30	2142	1651	66	
1690	1791	1747	1698	A. Y.	Fr. 29 Feb.	2	30	2143	1652	67	
1691	1792	1748	1699		Th. 19 Mar.	21	30	2144	1653	68	
B. 1692	1793	1749	1700	A. S.	Mo. 7 Mar.	10	31	2145	1654	69	
1693	1794	1750	1701		Sa. 26 Mar.	28	30	2146	1655	70	
1694	1795	1751	1702		Fr. 16 Mar.	18	30	2147	1656	71	
1695	1796	1752	1703	A. J.	Tu. 5 Mar.	7	30	2148	1657	72	
B. 1696	1797	1753	1704		Mo. 23 Mar.	25	31	2149	1658	73	
1697	1798	1754	1705		Fr. 12 Mar.	14	30	2150	1659	74	
1698	1799	1755	1706	A. J.	We. 2 Mar.	4	30	2151	1660	75	
1699	1800	1756	1707		Tu. 21 Mar.	23	31	2152	1661	76	

<sup>1</sup> In the current year K. Y. 4783, the months Chaitra and Aśvina are reversed, and the month Agraharā is Aśvina or expunged.



PART II.—LUNI-SOLAR YEAR.													
I.	XII.		XIII.	XIV.	XV.	XVI.	XVII.	XVIII.	XIX.				
CHRISTIAN YEAR.	Begin on the new moon occurring next before the 1st Vaisakha of the Solar year.		Begin on the 1st of the lunar month Aashad.	Character of the year, and initial of Adhik or 'leap' month, in intercalary year, (see p. 173.)	Date of the last moon conjunction of ( ) and ( ), whence the new lunisolar year commences.	Same date in Hindu Solar year (Chaitra, &c., &c.)	Number of days in the Solar year, month Chaitra.	Janmurti Era of India, Day, Jan, Aera, &c., &c.	Burmese Vajir Era (used also in Arracan, &c., &c.)	Chinese Era.	Year of the Cycle of 60.	Approximate commencement from the new union, viz.: Indian ☉ enters ♈ in old style.	Years in which intercalary months are introduced.
A. D.	Kalyug.	Saurat.	Yadd of Dnyan India.		Old Style.								
B. 1700	4801	1737	1108	A. C.	Sa. 9 Mar.	13	31	2243	1062	17	8 Feb.		
1701	4802	1738	1109	A. V.	Fr. 28 Mar.	26	30	2244	1063	18	28 Jan.		
1702	4803	1739	1110		Tu. 17 Mar.	19	30	2245	1064	19	17 Jan.		*
1703	4804	1740	1111	A. S.	Sa. 6 Mar.	8	31	2246	1065	20	4 Feb.		
B. 1704	4805	1741	1112		Fr. 24 Mar.	27	31	2247	1066	21	25 Jan.		
1705	4806	1742	1113		We. 14 Mar.	16	30	2248	1067	22	14 Jan.		*
1706	4807	1743	1114	A. J.	Sa. 3 Mar.	5	30	2249	1068	23	1 Feb.		
1707	4808	1744	1115		Sa. 23 Mar.	24	31	2250	1069	24	22 Jan.		*
B. 1708	4809	1745	1116		We. 10 Mar.	13	30	2251	1070	25	9 Feb.		
1709	4810	1746	1117	A. C.	Ma. 28 Feb.	2	30	2252	1071	26	29 Jan.		*
1710	4811	1747	1118		Sa. 18 Mar.	20	30	2253	1072	27	18 Jan.		*
1711	4812	1748	1119	A. R.	Th. 8 Mar.	10	31	2254	1073	28	6 Feb.		
B. 1713	4813	1749	1120		We. 26 Mar.	28	30	2255	1074	29	27 Jan.		*
1713	4814	1750	1121		Sa. 16 Mar.	17	30	2256	1075	30	15 Jan.		*
1714	4815	1751	1122	A. A.	Th. 4 Mar.	5	30	2257	1076	31	2 Feb.		
1715	4816	1752	1123		We. 23 Mar.	25	31	2258	1077	32	24 Jan.		
B. 1716	4817	1753	1124		Ma. 12 Mar.	14	30	2259	1078	33	13 Jan.		*
1717	4818	1754	1125	A. V.	Fr. 1 Mar.	3	30	2260	1079	34	30 Jan.		
1718	4819	1755	1126		Th. 20 Mar.	22	30	2261	1080	35	20 Jan.		*
1719	4820	1756	1127		Tu. 10 Mar.	11	31	2262	1081	36	8 Feb.		
B. 1720	4821	1757	1128	A. R.	Sa. 27 Feb.	0	30	2263	1082	37	28 Jan.		
1721	4822	1758	1129		Fr. 17 Mar.	19	30	2264	1083	38	17 Jan.		*
1722	4823	1759	1130	A. S.	Tu. 6 Mar.	8	30	2265	1084	39	4 Feb.		
1723	4824	1760	1131		Ma. 25 Mar.	27	31	2266	1085	40	25 Jan.		
B. 1724	4825	1761	1132		Fr. 13 Mar.	15	30	2267	1086	41	15 Jan.		*
1725	4826	1762	1133	A. J.	We. 3 Mar.	3	30	2268	1087	42	2 Feb.		
1726	4827	1763	1134		Tu. 22 Mar.	24	31	2269	1088	43	22 Jan.		
1727	4828	1764	1135		Sa. 11 Mar.	13	31	2270	1089	44	11 Jan.		3
B. 1728	4829	1765	1136	A. C.	We. 29 Feb.	1	30	2271	1090	45	30 Jan.		
1729	4830	1766	1137		Tu. 18 Mar.	20	30	2272	1091	46	18 Jan.		7
1730	4831	1767	1138	A. R.	Sa. 8 Mar.	10	31	2273	1092	47	6 Feb.		
1731	4832	1768	1139		Fr. 26 Mar.	28	31	2274	1093	48	27 Jan.		
B. 1732	4833	1769	1140		We. 15 Mar.	17	30	2275	1094	49	16 Jan.		5
1733	4834	1770	1141	A. A.	Sa. 4 Mar.	6	30	2276	1095	50	3 Feb.		
1734	4835	1771	1142		Sa. 23 Mar.	25	31	2277	1096	51	23 Jan.		
1735	4836	1772	1143		We. 12 Mar.	14	31	2278	1097	52	12 Jan.		*
B. 1736	4837	1773	1144	A. V.	Ma. 1 Mar.	3	30	2279	1098	53	31 Jan.		
1737	4838	1774	1145		Sa. 20 Mar.	22	30	2280	1099	54	20 Jan.		*
1738	4839	1775	1146	A. R.	Th. 9 Mar.	11	31	2281	1100	55	7 Feb.		
1739	4840	1776	1147		We. 28 Mar.	29	30	2282	1101	56	28 Jan.		
B. 1740	4841	1777	1148		Sa. 16 Mar.	18	30	2283	1102	57	17 Jan.		*
1741	4842	1778	1149	A. S.	Fr. 6 Mar.	8	30	2284	1103	58	4 Feb.		
1742	4843	1779	1150		Th. 24 Mar.	27	31	2285	1104	59	25 Jan.		
1743	4844	1800	1151		Ma. 14 Mar.	15	30	2286	1105	60	14 Jan.		*
B. 1744	4845	1801	1152	A. J.	Fr. 3 Mar.	4	30	2287	1106	1	2 Feb.		
1745	4846	1802	1153		Th. 21 Mar.	23	29	2288	1107	2	21 Jan.		
1746	4847	1803	1154		Tu. 11 Mar.	13	31	2289	1108	3	11 Jan.		3
1747	4848	1804	1155	A. C.	Sa. 28 Feb.	1	30	2290	1109	4	30 Jan.		
B. 1748	4849	1805	1156		Fr. 18 Mar.	29	30	2291	1110	5	20 Jan.		7
1749	4850	1806	1157	A. R.	Tu. 7 Mar.	0	30	2292	1111	6	7 Feb.		

\* In the current year E. Y. 1783, the months Chaitra and Aashad are repeated, and the month Agrahana is repeated or expunged.



PART II.—LUNI-SOLAR YEAR.										
I.	XII.		XIII.	XIV.	XV.	XVI.	XVII.	XVIII.	XIX.	
Chinese Year.	Begin on the new moon preceding the last before the last of the sidereal year.		Begin on the 1st of the lunar month.	Character of the year, and total of 4000s or 1000s months, in intercalary year. (See p. 173.)		Date of the last moon conjunction (and where the new Indian year commences.)	Same date in Hindu sidereal month Chaitra. (1st, 1st, etc.)	Number of days in the sidereal month Chaitra.	Chinese Era of India, Ceylon, Ava, Siam, etc.	Chinese Era (Jaiyue, etc. (Jaiyue, etc.))
A.D.	Kalyug.	Samvat.	End of the year.	New Style.		Same date in Hindu sidereal month Chaitra. (1st, 1st, etc.)	Number of days in the sidereal month Chaitra.	Chinese Era of India, Ceylon, Ava, Siam, etc.	Chinese Era (Jaiyue, etc. (Jaiyue, etc.))	Chinese Era.
1750	4851	1807	1158	A.A.	Mo. 8 Apr.	28	31	2293	1312	7
1751	4852	1808	1159		Sa. 27 Mar.	17	30	2294	1313	8
B. 1752	4853	1809	1160		We. 15 Mar.	6	29	2295	1314	9
1753	4854	1810	1161		Th. 3 Apr.	25	30	2296	1315	10
1754	4855	1811	1162	A.V.	Sa. 23 Mar.	15	31	2297	1316	11
1755	4856	1812	1163		Th. 12 Mar.	4	30	2298	1317	12
B. 1756	4857	1813	1164		Th. 30 Mar.	21	30	2299	1318	13
1757	4858	1814	1165		Sa. 29 Mar.	11	31	2300	1319	14
1758	4859	1815	1166	A.B.	Sa. 9 Apr.	30	31	2301	1320	15
1759	4860	1816	1167		We. 28 Mar.	19	30	2302	1321	16
B. 1760	4861	1817	1168		Sa. 16 Mar.	7	30	2303	1322	17
1761	4862	1818	1169		Sa. 4 Apr.	26	31	2304	1323	18
1762	4863	1819	1170	A.J.	Th. 25 Mar.	16	31	2305	1324	19
1763	4864	1820	1171		Mo. 14 Mar.	4	29	2306	1325	20
B. 1764	4865	1821	1172		Sa. 1 Apr.	28	30	2307	1326	21
1765	4866	1822	1173		Th. 23 Mar.	12	31	2308	1327	22
1766	4867	1823	1174	A.C.	Ta. 11 Mar.	1	30	2309	1328	23
1767	4868	1824	1175		Mo. 30 Mar.	20	30	2310	1329	24
B. 1768	4869	1825	1176		Fr. 18 Mar.	9	30	2311	1330	25
1769	4870	1826	1177		Th. 6 Apr.	28	31	2312	1331	26
1770	4871	1827	1178	A.A.	Mo. 26 Mar.	18	30	2313	1332	27
1771	4872	1828	1179		Sa. 16 Mar.	6	30	2314	1333	28
B. 1772	4873	1829	1180		Fr. 3 Apr.	25	30	2315	1334	29
1773	4874	1830	1181		Ta. 23 Mar.	14	31	2316	1335	30
1774	4875	1831	1182	A.V.	Sa. 12 Mar.	2	30	2317	1336	31
1775	4876	1832	1183		Fr. 31 Mar.	21	30	2318	1337	32
B. 1776	4877	1833	1184		We. 20 Mar.	10	30	2319	1338	33
1777	4878	1834	1185		Mo. 7 Apr.	29	31	2320	1339	34
1778	4879	1835	1186	A.B.	Sa. 29 Mar.	19	30	2321	1340	35
1779	4880	1836	1187		We. 17 Mar.	7	30	2322	1341	36
B. 1780	4881	1837	1188		Ta. 4 Apr.	26	30	2323	1342	37
1781	4882	1838	1189		Sa. 24 Mar.	15	31	2324	1343	38
1782	4883	1839	1190	A.J.	Th. 14 Mar.	4	30	2325	1344	39
1783	4884	1840	1191		We. 2 Apr.	30	30	2326	1345	40
B. 1784	4885	1841	1192		Sa. 21 Mar.	12	31	2327	1346	41
1785	4886	1842	1193		Th. 16 Mar.	1	31	2328	1347	42
1786	4887	1843	1194	A.C.	We. 29 Mar.	19	30	2329	1348	43
1787	4888	1844	1195		Mo. 19 Mar.	8	30	2330	1349	44
B. 1788	4889	1845	1196		Sa. 6 Apr.	28	31	2331	1350	45
1789	4890	1846	1197		Th. 26 Mar.	17	31	2332	1351	46
1790	4891	1847	1198	A.A.	Mo. 14 Mar.	5	30	2333	1352	47
1791	4892	1848	1199		Sa. 3 Apr.	24	30	2334	1353	48
B. 1792	4893	1849	1200		Fr. 23 Mar.	14	31	2335	1354	49
1793	4894	1850	1201		Ta. 12 Mar.	2	31	2336	1355	50
1794	4895	1851	1202	A.V.	Mo. 31 Mar.	21	30	2337	1356	51
1795	4896	1852	1203		Fr. 20 Mar.	10	30	2338	1357	52
B. 1796	4897	1853	1204		Th. 7 Apr.	29	31	2339	1358	53
1797	4898	1854	1205		Ta. 28 Mar.	18	30	2340	1359	54
1798	4899	1855	1206	A.B.	Sa. 17 Mar.	7	30	2341	1360	55
1799	4900	1856	1207		Fr. 5 Apr.	26	30	2342	1361	56

<sup>1</sup> The particulars of the Chinese years from a. d. 1723 to 1733 inclusive, are taken from Beyer's \* *Pantheon Sinitum*.<sup>2</sup> Those from 1745 to 1815, from ————, and some few subsequent years from various sources. The rest are supplied by

PART II.—LUNI-SOLAR YEAR.											
I.	XII.		XIII.	XIV.	XV.	XVI.	XVII.	XVIII.	XIX.		
CHRISTIAN YEAR.	Eras on the new moon occurring before the full moon of the solar year.		Eras on the full moon of the solar year.	Character of the year, and initial of Añka or Varsa month, in solar year. (See p. 176.)	Date of the last new moon conjunction of Chand 2. Añka the new full-moon year commences.	Initial date in Hindu solar month Chaitra. (div. sect.)	Number of days in the Hindu solar month Chaitra.	Remoter Era of India, Days, Jan, Apr, May, etc.	Remoter Vajrap Era, (used also in Aratta, etc.)	Calcutta Era.	Assumed astronomical year next to the present year.
A. D.	Kaliyug.	Samvat.	Full of Super-Judic.		NEW STYLE.					Year of the Cycle of 60.	Assumed astronomical year next to the present year.
1800	4901	1857	1208	A. J.	Tu. 26 Mar.	15	31	2343	1163	57	26 Jan.
1801	4902	1858	1209		Sa. 15 Mar.	4	30	2344	1163	58	13 Feb.
1802	4903	1859	1210		Fr. 3 Apr.	23	30	2345	1164	59	3 Feb.
1803	4904	1860	1211	A. C.	We. 23 Mar.	12	30	2346	1165	60	23 Jan.
1804	4905	1861	1212		Sa. 11 Mar.	1	31	2347	1166	1	11 Feb.
1805	4906	1862	1213		Sa. 30 Mar.	19	30	2348	1167	2	31 Jan.
1806	4907	1863	1214	A. S.	We. 19 Mar.	8	30	2349	1168	3	19 Feb.
1807	4908	1864	1215		Tu. 7 Apr.	27	30	2350	1169	4	8 Feb.
1808	4909	1865	1216		Sa. 27 Mar.	17	31	2351	1170	5	29 Jan.
1809	4910	1866	1217	A. A.	Th. 16 Mar.	5	30	2352	1171	6	16 Feb.
1810	4911	1867	1218		We. 4 Apr.	24	30	2353	1172	7	6 Feb.
1811	4912	1868	1219		Sa. 24 Mar.	13	30	2354	1173	8	27 Jan.
1812	4913	1869	1220	A. V.	Fr. 13 Mar.	2	31	2355	1174	9	16 Feb.
1813	4914	1870	1221		Th. 1 Apr.	21	30	2356	1175	10	3 Feb.
1814	4915	1871	1222		Mo. 21 Mar.	10	30	2357	1176	11	21 Feb.
1815	4916	1872	1223	A. B.	Sa. 9 Apr.	29	31	2358	1177	12	10 Feb.
1816	4917	1873	1224		Th. 28 Mar.	18	31	2359	1178	13	30 Jan.
1817	4918	1874	1225		Tu. 18 Mar.	7	30	2360	1179	14	17 Feb.
1818	4919	1875	1226	A. S.	Sa. 8 Apr.	35	30	2361	1180	15	6 Feb.
1819	4920	1876	1227		Fr. 28 Mar.	14	31	2362	1181	16	27 Jan.
1820	4921	1877	1228		Tu. 14 Mar.	4	31	2363	1182	17	13 Feb.
1821	4922	1878	1229	A. J.	Mo. 2 Apr.	23	30	2364	1183	18	2 Feb.
1822	4923	1879	1230		Sa. 23 Mar.	12	30	2365	1184	19	23 Jan.
1823	4924	1880	1231		We. 12 Mar.	1	31	2366	1185	20	10 Feb.
1824	4925	1881	1232	A. C. A.	Tu. 30 Mar.	20	31	2367	1186	21	31 Jan.
1825	4926	1882	1233		Sa. 19 Mar.	8	30	2368	1187	22	17 Feb.
1826	4927	1883	1234		Fr. 7 Apr.	27	30	2369	1188	23	7 Feb.
1827	4928	1884	1235	A. S.	Tu. 27 Mar.	16	31	2370	1189	24	27 Jan.
1828	4929	1885	1236		Sa. 16 Mar.	6	30	2371	1190	25	15 Feb.
1829	4930	1886	1237		Sa. 4 Apr.	24	30	2372	1191	26	4 Feb.
1830	4931	1887	1238	A. A.	We. 24 Mar.	13	30	2373	1192	27	24 Jan.
1831	4932	1888	1239		Sa. 13 Mar.	2	31	2374	1193	28	11 Feb.
1832	4933	1889	1240		Sa. 31 Mar.	21	30	2375	1194	29	1 Feb.
1833	4934	1890	1241	A. B.	Th. 21 Mar.	10	30	2376	1195	30	20 Feb.
1834	4935	1891	1242		We. 9 Apr.	29	30	2377	1196	31	8 Feb.
1835	4936	1892	1243		Sa. 29 Mar.	18	31	2378	1197	32	29 Jan.
1836	4937	1893	1244	A. S.	Th. 17 Mar.	6	30	2379	1198	33	16 Feb.
1837	4938	1894	1245		We. 5 Apr.	25	30	2380	1199	34	5 Feb.
1838	4939	1895	1246		Mo. 26 Mar.	15	30	2381	1200	35	26 Jan.
1839	4940	1896	1247	A. J.	Fr. 15 Mar.	4	31	2382	1201	36	13 Feb.
1840	4941	1897	1248		Th. 3 Apr.	22	30	2383	1202	37	3 Feb.
1841	4942	1898	1249		Mo. 22 Mar.	11	30	2384	1203	38	20 Feb.
1842	4943	1899	1250	A. C.	Sa. 12 Mar.	1	31	2385	1204	39	10 Feb.
1843	4944	1900	1251		Th. 30 Mar.	19	31	2386	1205	40	30 Jan.
1844	4945	1901	1252		Tu. 19 Mar.	8	30	2387	1206	41	18 Feb.
1845	4946	1902	1253	A. S.	Mo. 7 Apr.	27	30	2388	1207	42	7 Feb.
1846	4947	1903	1254		Fr. 27 Mar.	16	31	2389	1208	43	27 Jan.
1847	4948	1904	1255		Tu. 16 Mar.	5	31	2390	1209	44	14 Feb.
1848	4949	1905	1256	A. A.	Mo. 3 Apr.	23	30	2391	1210	45	4 Feb.
1849	4950	1906	1257		Sa. 24 Mar.	12	30	2392	1211	46	24 Jan.

<sup>1</sup> The expunged month in the 4924th year of the Kaliyug fell on Agrahayan, otherwise Margashira, and the intercalated months were Aashla and Chaitra of the ensuing year.

PART II.—LUNI-SOLAR YEAR.												
I.	XII.		XIII.	XIV.	XV.	XVI.	XVII.	XVIII.	XIX.			
CHRISTIAN YEAR.	Beginning on the new moon occurring next before the 1st Vjadhya of the solar year.		Beginning on the 1st of the lunar month Chaitra.	Beginning of the year, and initial of <i>Aditi</i> or <i>Isana</i> month, in leetivary year, (see p. 172.)	Days of the last moon conjunction of <i>Aditi</i> or <i>Isana</i> with the new full-lunar year commences.	Same date in <i>Shukla</i> <i>Aditi</i> month <i>Chaitra</i> (v.v. mark).	Number of days in the <i>Shukla</i> lunar month <i>Chaitra</i> .	Beginning of the <i>Shukla</i> <i>Aditi</i> , v.v. mark, etc.	Burmese <i>Vijaya</i> <i>Isana</i> (used also in <i>Aditi</i> , v.v. mark, etc.)	Years of the Cycle of 60, (v.v. mark, etc.)	Approximate commencement from the new moon next before <i>Aditi</i> in new style.	Years in which <i>Aditi</i> months are introduced.
A. D.	Kaliyug.	Samvat.	Full of Upper India.		NEW STYLE.					LXVII. Cycle.		
1850	4031	1907	1358	A.V.	We. 13 Mar.	2	31	2393	1212	47	11 Feb.	
1851	4032	1908	1359		Tu. 1 Apr.	21	31	2394	1213	48	1 Feb.	*
B. 1852	4053	1909	1360	A.B.	Sa. 20 Mar.	9	30	2395	1214	49	10 Feb.	
1853	4054	1910	1361		Fr. 8 Apr.	28	30	2396	1215	50	8 Feb.	
1854	4055	1911	1362		We. 29 Mar.	18	31	2397	1216	51	29 Jan.	*
1855	4056	1912	1363	A.S.	Sa. 18 Mar.	8	30	2398	1217	52	16 Feb.	
B. 1856	4057	1913	1364		Sa. 5 Apr.	25	30	2399	1218	53	4 Feb.	
1857	4058	1914	1365		We. 24 Mar.	14	30	2400	1219	54	25 Jan.	*
1858	4059	1915	1366	A.J.	Mo. 13 Mar.	3	31	2401	1220	55	13 Feb.	
1859	4060	1916	1367		Sa. 2 Apr.	22	30	2402	1221	56	3 Feb.	
B. 1860	4061	1917	1368	A.C.	Th. 22 Mar.	11	30	2403	1222	57	23 Jan.	*
1861	4062	1918	1369	A.C.	We. 10 Apr.	30	30	2404	1223	58	10 Feb.	
1862	4063	1919	1370		Sa. 29 Mar.	19	31	2405	1224	59	30 Jan.	*
1863	4064	1920	1371	A.S.	Fr. 18 Mar.	8	30	2406	1225	60	18 Feb.	
B. 1864	4065	1921	1372		We. 6 Apr.	28	30	2407	1226	1	7 Feb.	*
1865	4066	1922	1373		Mo. 27 Mar.	18	30	2408	1227	2	27 Jan.	
1866	4067	1923	1374	A.A.	Fr. 16 Mar.	7	31	2409	1228	3	14 Feb.	
1867	4068	1924	1375		Th. 4 Apr.	23	30	2410	1229	4	4 Feb.	
B. 1868	4069	1925	1376		Mo. 23 Mar.	13	30	2411	1230	5	24 Jan.	*
1869	4070	1926	1377	A.V.	Sa. 12 Mar.	2	30	2412	1231	6	11 Feb.	
1870	4071	1927	1378		Fr. 1 Apr.	21	31	2413	1232	7	1 Feb.	*
1871	4072	1928	1379	A.B.	Tu. 21 Mar.	9	30	2414	1233	8	19 Feb.	
B. 1872	4073	1929	1380		Mo. 9 Apr.	28	30	2415	1234	9	9 Feb.	*
1873	4074	1930	1381		Fr. 28 Mar.	17	31	2416	1235	10	28 Jan.	
1874	4075	1931	1382	A.S.	We. 16 Mar.	7	31	2417	1236	11	16 Feb.	
1875	4076	1932	1383		Tu. 6 Apr.	26	30	2418	1237	12	6 Feb.	
B. 1876	4077	1933	1384		Sa. 25 Mar.	14	30	2419	1238	13	26 Jan.	*
1877	4078	1934	1385	A.J.	We. 14 Mar.	3	31	2420	1239	14	12 Feb.	
1878	4079	1935	1386		Tu. 2 Apr.	22	31	2421	1240	15	2 Feb.	
1879	4080	1936	1387	A.C.	Sa. 23 Mar.	11	30	2422	1241	16	23 Jan.	*
B. 1880	4081	1937	1388		Sa. 16 Apr.	30	30	2423	1242	17	11 Feb.	
1881	4082	1938	1389		We. 30 Mar.	19	31	2424	1243	18	30 Jan.	*
1882	4083	1939	1390	A.S.	Sa. 19 Mar.	7	30	2425	1244	19	17 Feb.	
1883	4084	1940	1391		Sa. 7 Apr.	26	30	2426	1245	20	7 Feb.	
B. 1884	4085	1941	1392		Th. 27 Mar.	16	30	2427	1246	21	28 Jan.	*
1885	4086	1942	1393	A.A.	Mo. 16 Mar.	5	31	2428	1247	22	14 Feb.	
1886	4087	1943	1394		Sa. 4 Apr.	23	30	2429	1248	23	4 Feb.	
1887	4088	1944	1395		Th. 24 Mar.	13	30	2430	1249	24	24 Jan.	*
B. 1888	4089	1945	1396	A.V.	Tu. 13 Mar.	2	30	2431	1250	25	14 Feb.	
1889	4090	1946	1397		Sa. 31 Mar.	20	31	2432	1251	26	31 Jan.	*
1890	4091	1947	1398	A.B.	Fr. 21 Mar.	9	30	2433	1252	27	19 Feb.	
1891	4092	1948	1399		Th. 9 Apr.	28	30	2434	1253	28	9 Feb.	
B. 1892	4093	1949	1400		Mo. 28 Mar.	17	30	2435	1254	29	29 Jan.	*
1893	4094	1950	1401	A.S.	Sa. 17 Mar.	6	31	2436	1255	30	16 Feb.	
1894	4095	1951	1402		Th. 6 Apr.	24	30	2437	1256	31	5 Feb.	
1895	4096	1952	1403		Tu. 26 Mar.	14	30	2438	1257	32	25 Jan.	*
B. 1896	4097	1953	1404	A.J.	Sa. 14 Mar.	3	30	2439	1258	33	13 Feb.	
1897	4098	1954	1405		Fr. 2 Apr.	22	31	2440	1259	34	2 Feb.	
1898	4099	1955	1406	A.C.	Tu. 22 Mar.	10	30	2441	1260	35	22 Jan.	*
1899	5000	1956	1407		Mo. 10 Apr.	29	30	2442	1261	36	10 Feb.	
1900	5001	1957	1408		Sa. 31 Mar.	19	31	2443	1262	37	1 Feb.	

\* The Burmese and the Ceylonese luni-solar years commence on the same day as the Hindu, being derived from the same original authorities.

A special work on Muhammadan dates has lately been produced by Herr Joh. Von Gumpach (Madden, 1856), which I have duly examined for the purpose of testing Prinsep's previously-published results. Prinsep's Tables, it will be seen, are calculated from the initial date of the 16th of July, 622, A.D., while Gumpach commences from the 15th of that month.<sup>1</sup>

Prinsep continues to follow the Julian style up to A.D. 1750, while Gumpach introduces the Gregorian calendar from A.D. 1582.

The tables are, therefore, uniform in their several correspondents from A.H. 1 to A.H. 990 = Julius, 1582 (26th or 25th of January, as the optional initial day may determine). Thereafter there is a uniform discrepancy of nine days between the two serial calculations,

<sup>1</sup> [The following is M. Gumpach's statement determining the selection of the initial date for his tables]:—The common era of the Mahometans, as has already been stated, is that of the flight of Mahomet (تاريخ الهجرة) the era of the Flight—Hegira. Its origin is by the Mahometans themselves referred to two distinct days; not that there is in reality a difference of opinion among them as to the true date, but that its epoch is fixed upon two principles, according to the astronomical or the civil view of the case. The majority of astronomers make it a Mahometan Thursday, = 15 Thaur 932 A.H., or the moment of sunset on our Wednesday, the 14th July (old style) 622 A.D., so that the 1st of Moharram of the first year of the Hegira would mainly coincide with our Thursday, the 16th July, 622 A.D., according to the Julian calendar. The majority of historical writers, on the contrary, place it a day later. All are in the habit of including in their expression of dates the corresponding day of the week, and thus not only obtrude the uncertainty, which otherwise would attach to such dates, but, at the same time, afford a ready means of ascertaining the principle adopted, with regard to the epoch of the era, by each individual writer. Whenever the Turks express a date according to their solar calendar, they commonly name the lunar year of the Hegira, including the 1st of March or the epoch of the solar year, to which that date belongs. . . . As will be seen on reference to the tables, the 1st of Moharram of the first year of the Hegira has been made to coincide, not with Friday the 16th, but with Thursday the 15th July, 622 A.D.; or, astronomically speaking, the epoch of the Hegira has been referred to the moment of sunset, not on Thursday the 15th, but on Wednesday the 14th July, 622 A.D. For a twofold reason. In the first place, it is in itself a matter of indifference which of the two dates be chosen for the basis of our tables, inasmuch as both are in use among Mahometan writers; the week-day, as has already been observed, frequently being the only criterion for the true reduction of a given date. In the second place, whilst the Thursday is adopted by the far greater majority of Mahometan astronomers, and thus has usually to be taken in the reduction of astronomical dates, its tabular use, at the same time, is more convenient to the layman, because it simplifies the conversion of civil and religious dates, which are mostly based on the Friday as the epoch of the Mahometan era. Two Christian dates are assigned to the 1st Moharram of the year 990 of the Hegira, namely: 'J. 1582, 25th January,' and 'G. 1582, 4th February.' The former is to be taken when, in the year 1582 A.D., the given Mahometan date falls previous to the 5th October; the latter, when it falls subsequent to the 14th October. The reason is, that our tables are computed according to the Julian calendar or old style, up to the 4th October, 1582 A.D., inclusive, and according to the Gregorian calendar or new style, since its introduction in that year, when ten days were passed over, and, the 4th October (corresponding to the 16th Ramadhan 990 A.H.), being a Thursday, the next day, a Friday (corresponding to the 17th Ramadhan), was accounted, not the 5th, but the 15th October, 1582, A.D., the usual succession of the week-days being preserved.'

consisting of the ten days passed over between the Julian and Gregorian styles, minus the one day initial difference, until A.H. 1112 = A.D. 1700, when the apparent difference increases to ten days,<sup>1</sup> the days of the week, however, continuing to correspond in their previous relative degree; and this divergence necessarily remains until A.H. 1166 = A.D. 1752, when the discrepancies are reconciled, and the Hijra year is made by Prinsep, under the new series, to commence on the 8th of November, being the fourth day of the week; and by Gumpach, on the 7th of November, corresponding with the third day of the week.

<sup>1</sup> 'The difference between the Old and the New Style up to the year 1699 was only ten days, after 1700 it was eleven days.' 'Chronology of History,' Sir Harris Nicholas, p. 26.



## GENEALOGICAL TABLES.

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THE purpose of the present division of our Appendix is by no means to attempt any improvement, nor even a critical adjustment, of the catalogues of princes preserved in the legendary records of the Brâhmanas, but merely to afford a succinct synopsis of the principal ancient and modern dynasties of India, and of the neighbouring countries, for reference as to names, and, where accessible, as to dates.

For the early or mythological history of the Hindûs, little can be done beyond enumerating the mere names, and marking the few variations in the lists of Sir Wm. Jones, Wilford, Bentley, Hamilton, Wilson, and, latterly, Col. Tod, who have endeavoured, successively, to trace the parallelism of the solar and lunar races, and assign to them more probable dates than those extravagantly put forth in the 'Purâṇas.' As the regular succession from father to son is given in them, it was not a difficult task to apply the ordinary term of human generation, derived from the authentic histories of other countries, to the adjustment of the Hindû Chronology. Thus Bâma in the solar line, who is placed by the Brâhmanas between the silver and brassen ages (867102 a.c.), was brought down by Sir Wm. Jones to a.c. 2020, and reconciled with the Râma of Scripture; Pradyota, of the lunar race, in whose reign the last Buddha appeared, was brought down to a.c. 1029, the assumed epoch of Śākya in Tibet and China; and Nanda to 699, etc. In the case of the Magadhâ Râjas this adjustment was the more easy, because the length of each dynasty is given in reasonable terms from Jarâsandha, the contemporary of Yudhisṭhira, downwards; and the error might be only in the wrong assumption of the initial date, the epoch of the Kali Yuga, which the pandits allotted to the year 3101 a.c. After the discovery of the identity of Chandra Gupta with Sandracottus, pointed out by Sir Wm. Jones ('As. Res.', vol. iv. p. 26), and followed up by Wilford (vol. xv. p. 262), a further



reduction of 250 years in the position assigned to him in Sir William's first list became necessary; and the diminished rate of generations, applied backwards, brought Yudhishtira, and his contemporaries Arjun, Krishna, and Jarisandha, within the twelfth or thirteenth century before Christ. A most satisfactory confirmation of the modified epochs of Nanda, Chandra Gupta, and Asoka has been since derived from the chronological tables of the Buddhists in Ava, published in Crawford's Embassy, and again in those of the Ceylon princes, made known by the Honorable G. Turnour; their near concurrence with Greek history, in the only available point of comparison, reflects back equal confidence upon the epoch assigned to the founder of their religion (a.c. 544), in spite of the Chinese and Tibetan authorities, most (though not all) of which place Buddha 500 years earlier. It was this that misled Sir Wm. Jones in the epoch of Pradyota.

There are some discrepancies in the Burmese tables difficult to be explained, such as the placing of Ajātasatra 80 years prior to Śiṣunāga, and the occurrence of Chandra Gupta still 50 years too soon: but we must refer those who would investigate this, and all other branches of the intricate subject of Hindū and Baudhha chronology, to the learned authors we have above mentioned, satisfying ourselves here with exhibiting a comparative table of the gradual changes effected by the progress of research in a few of the principal epochs.

Names.	Patriotic Date.	Jones.	Wilford.	Bentley.	Wilson.	Ed.	Burmese Dat.
	B.C.	B.C.	B.C.	B.C.	B.C.	B.C.	B.C.
Ikabwaku and Buddha .....	2183102	5000	2760	1625	—	2200	—
Rāma .....	897102	2025	1380	950	—	1100	—
Yudhishtira ..	3102			676	1420		
Sumitra and Pradyota ..	2100	1025	780	119	915	—	600
Śiṣunāga .....	1962	870	600	—	777	600	472
Nanda .....	1600	695	—	—	416	—	404
Chandragupta ..	1502	690	350	—	516	329	392
Asoka .....	1470	640	—	—	269	—	330
Balin .....	998	145	—	—	21	10	—
Chandrabhā the last of Ma- gadhā Rājās }	B.C. 452	300 A.D.	—	—	425 A.D.	546 A.D.	

The aid of astronomy has been successfully called in to fix such epochs as afforded the requisite data; thus the situation of the equinoctial colure in the time of the astronomer Parāśara, who flourished under Yudhishtira, is fixed by Davis in 1591 a.c.; by Sir Wm. Jones, Colebrooke, and Bentley, in 1180; which latter closely accords with the epoch of the Cycle of Parāśurāma, used in the Dakhan, and ap-



parently unknown to these authors, *a.c.* 1176. Bentley, on another occasion, alters this date to 575 *a.c.*! he also places Rāma in 950 *a.c.*; but there is great uncertainty and incongruity in many of his determinations of the dates of native princes and of books, from the prejudices he exhibits, although he is entitled to every confidence in his ingenious mode of calculating the period at which the various improvements in astronomy were introduced, and the 'Siddhāntas' written or revised, by the time when the positions of the planets, as assigned by their tables, accorded best with the more accurate results of European astronomy. From the minimum errors, and the procession of the equinoxes (first applied to such a purpose by Sir Isaac Newton), we have the following epochs substantially ascertained:—

	<i>a.c.</i>	
Invention of the Nakshatras or Hindu Lunar mansions .....	1425	B.
The Mahābhārata war, according to Willford .....	1867	
The Solar Zodiac formed by Purāṇas (under Yudhiṣṭhira) .....	1180	
Era of Parasurāma commences (see page 133) 7th August .....	1176	
A Lunar Cycle invented, and procession discovered (Rāma ?) .....	945	B.
Four Yugas, founded on Jupiter's motions .....	216	B.
<i>a.d.</i>		
Seven Manvantaras, founded on Saturn's revolutions .....	81	B.
The 'Mānvyasa,' written by Valmiki .....	291	B.
Varāha Mihira, flourished, according to Tejga astronomers (also according to Sir W. Jones, Colebrooke, &c., from procession of the equinoxes) .....	499	
Tables of the 'Brahmā Siddhānta,' fixation of the sidereal Zodiac, and new system of Chronology, with extravagant antiquity, compiled) .....	538	B.
The 'Mahābhārata,' written from Kṛishṇa's jāyampati .....	600	B.
The Javanese translation of ditto, according to Baffles, in .....	1079	
Viṣṇu Purāṇa, whence genealogies of Andhra king, 4965 <i>a.y.</i> , of .....	954	W.
Origin of the Kala Chakra, or Javian Cycle (see <i>proc. sect.</i> p. 169) .....	965	
Tables of the 'Surya Siddhānta,' by Varāha Mihira .....	1098, 91	B.
The 'Varāha Saṁhita,' supposed by the same author, gives its own date,...	1049	
The 'Līlāvati' of Bhāskar Achārya bears its own date .....	1088	
The 'Bhāsvatī' of Saṁananda, pupil of Varāha, Saka 1021 .....	1109	
The 'Bhāgavat,' supposed by Colebrooke to be written by a grammarian in .....	1205	
The 'Arya Siddhānta,' compiled by Arya Bhatta .....	1322	
Gangadhar's Comment on Bhāskar Achārya .....	1420	
The Works of Keśava .....	1440	
The 'Grāhā Lāghava,' by Ganesha, his son .....	1520	

Mr. Bentley would rob the seven last of a few centuries upon very insufficient grounds; he also ventures to place the authorship of the 'Rāmāyana' in *a.d.* 291, and that of the 'Mahābhārata' in *a.d.* 600, on far too slender astronomical data: but his mania for modernizing

<sup>1</sup> [This should be 1150. Bhāskar's own date being 1072 Saka = *a.d.* 1150. Colebrooke's 'Arithmetic and Algebra of the Hindus,' Introduction ii. H. H. W.]

renders his testimony of the advanced knowledge of the Hindús in astronomy, at so remote a period as the fifteenth century before Christ, the more valuable; and we can have little hesitation in giving credit to the lines of princes assigned to this space, and even to further antiquity, although their history has been mixed up with incredible myths, and a falsified chronology. The more moderate and rational dates preserved by the Bauddha priests would lead to a supposition that the Bráhmans had purposely antiquated theirs, to confound their rivals in the contest for ascendancy over the minds of princes and people. That they should have suspended their histories with Sumitra of the solar, and Chandrabija of the lunar line, in the fifth century, might be naturally accounted for by the predominance of the Bauddhists at that period, or more probably by the destruction of the Hindú monarchies by the incursions of the Huns and Tartars. The 'Puráṇas,' or at least the prophetic supplements describing their genealogies, must have been compiled long afterwards, and the relative dates then falsified. But the principal blame in the business seems to fall upon the astronomers, who are accused of throwing back the commencement of their era: for, taking the data of the Paurāṇic tables, and allowing, with them, 1015 years from Yudhisṭhira to Nanda; and from the latter prince to Ptoloman 836 years (which name is identified with Ptolomien of the Chinese by Wilford, and placed in the year a.d. 648), the highest estimate of the 'Bhāgavat' gives 1857 a.c. for the epoch of the 'Kali Yuga,' instead of the 3101 assigned in the astronomical works; while in the 'Brahmaṇḍa Purāṇa' it is brought down to a.c. 1775; and in the 'Vāyu Purāṇa' to a.c. 1729. The Jains, it is said, adopt the still more modern epoch of 1078 a.c.; and if Anjana of Crawford's Burmese chronology, founder of the sacred epoch, be Arjuna, this contemporary of Yudhisṭhira is placed by the Bauddhas so late as 691 a.c.!

The Jains are generally also the most trustworthy authorities for the Middle Ages. To them it is asserted that Abū'l Fazl is indebted for the series of Bengal, Malwa, and other princes, published in the 'Ayín Akbari' with every appearance of accurate detail. The 'Rāja Taringini' of Kashmír also, the only Indian history of any antiquity, begins with Buddhist theogony. The Rājāvali collection of genealogies is quite modern, having been compiled by Siwai Jaya Sinh, of Ambér, in 1650. Neither that nor the native bards and chroniclers, whence the valuable data for the more modern history of Hindústán were furnished to Col. Tod for his 'Annals of Rājasthán,' are to be trusted when they trace the ancestry of their princes back, and strive to connect them with the later heroes of the 'Purāṇas'; nor even to the earlier centuries of the Christian era, in which we find hardly any

of their names confirmed either by grants, coins, or by the historians of neighbouring countries.

More authentic in every respect are the copper-plate grants, dug up in many parts of India, and the Sanscrit inscriptions on columns and temples, of which many have been deciphered and published, although the subject is by no means yet exhausted.<sup>1</sup> Owing to a fortunate pride of ancestry, most of these records of kingly grants recite a long train of antecedent Rájās, which serve to confirm or to supply vacancies in the more scanty written records. Of the value of these to history we cannot adduce a better instance than the confirmation of the Bhupála dynasty of the Rájās of Oaur, as given by Abú'l-Fazl in the occurrence of the names of Devapála, Dharma-pála, Rájapála, etc., on the several monuments at Monghir, Buddal, Dinájpur, Amgáchi, and Sárnáth near Benares, where also the date and the Buddha religion of the prince are manifested. It was supposed by Sir Charles Wilkins that the two first inscriptions referred to the first century of the Samvat era; but, as shown by Mr. Colebrooke, as well as by actual date at Sárnáth, they rise no earlier than the tenth. Indeed, the occurrence of inscriptions bearing unequivocal dates, anterior to that period, is very rare. Col. Tod adduces one of the fifth century (Samvat 597) discovered near Kota. Mr. Wathen has also recently produced two of the fourth and sixth centuries, dug up in Gujarát, which confirm, or rather correct, the early records of the Saurashtra dynasty. The oldest, however, exist in Ceylon, where they have been brought to light by Captain Forbes and the Honorable Mr. Turnour; some of these, of which translations are published by the latter author in the 'Ceylon Almanac' for 1834, are ascribed, on evidence of facts mentioned in them, to the year A.D. 262; but they bear no actual date. The period most prolific of inscriptions is from the ninth to the thirteenth century, when an anxiety seems to have prevailed among the priests to possess graven records of grants from the reigning or from former sovereigns, in order probably to secure their temples and estates from spoliation or resumption in those turbulent times. One of Col. Tod's inscriptions, translated by Mr. Colebrooke, in the 'Roy. As. Soc. Trans.', vol. i., expressly declares a rival grant to be futile, and derived from an unauthorized source.

The value of inscriptions, as elucidations of history, cannot better be exemplified than by the circumstance of the Burmese inscription in the Pálí character found at Gaya on the visit of the envoys from Ava in 1827, of which a translation was printed in the 'Jour. As. Soc. Beng.', vol. iii. p. 214. It records the frequent destructions and

<sup>1</sup> [These remarks were published in 1835 A.D.]

attempts to repair the Buddhist temple there, and the successful completion of it in the Sakarāj year 667, A.D. 1306.<sup>1</sup> Now Col. Tod's Rājput annals of Mēwār make particular mention of expeditions to recover Gaya from the infidels in 1200-50, which might not but for this record have been capable of explanation.

Where dates are not given in inscriptions, the style of the Nāgarī character will frequently serve to determine their antiquity. The cave temples of the west of India exhibit the most ancient form; the Gujarāt type, above alluded to, of the fourth century, has a part connection with them, and part with an inscription at Gaya, and another on the Allahābād Lāt; these again are linked by intervening gradations to the Tibetan alphabet, of which we know from Tibetan authors the existing Nāgarī of Magadhā was taken as the basis in the seventh century. We shall soon be able to furnish a tolerably accurate palaeographical series of the Devanāgarī, but can here only allude to the subject. In the tenth and eleventh centuries it undergoes the modification observable on the Gaur, Sarnāth, and Shikāwati inscriptions, resembling very nearly the Bengālī type, of which it is doubtless the parent. The modern Nāgarī is found on monuments of the thirteenth century, when the irruption of the Moghals prevented any further change. There is also a still earlier character on the Dillī, Allahābād, and Tihāt Lāts, which remains yet undeciphered; strong reasons have been advanced for its alliance to the Sanskrit group, if it contain not indeed the original symbols of that language. (See 'Jour. As. Soc.', vols. iii. iv.)

In all other countries, coins and medals have been esteemed the most legitimate archives and proofs of their ancient history. In India, little recourse to such evidence has hitherto been available. The few Hindū coins discovered have been neglected or deemed illegible. The subject is, however, now attracting more attention from the recent discovery of Bactrian and Indo-Scythic coins in great abundance in the Panjāb, bearing names hitherto quite unknown, in Greek, and on the reverse side in a form of Pehlvi character. The series is continued down to, and passes insensibly into, the purely Hindū coins of Kanauj, and some are in our possession, with Greek and Sanskrit on the same field. This very circumstance tends to bear out Col. Tod's supposition of the Kanauj princes having an Indo-Scythic origin. Yavan-nava, their progenitor, may indeed be 'the Greek Azo,' of whose coins we have so plentiful a supply.<sup>2</sup> The Sanskrit characters on the Kanauj coins are of the earlier type, be-

<sup>1</sup> Col. Burney reads the date, which is rather indistinct, 467, or A.D. 1106; but the above evidence tends to confirm the original reading.

<sup>2</sup> See vol. i. p. 120.

longing to the fourth or fifth century; they will soon, it is hoped, be read, and put us in possession of several new names.

Other coins, in a still more ancient character, and nearly resembling the undeciphered letters of the Lāts or the cave-sculptures,<sup>1</sup> are dug up in the Dihli district: they are found in company with Buddhist relics, and will, hereafter, doubtless, lead to historical information.

A third series of coins, with devices of a Brāhman bull, and a horseman, bears the Gsur Nāgarī of the tenth century; on this several names have been made out, Bhīmadeva, etc.; and on some the Persian titles of the first Musulmán conquerors are impressed.

A fourth series, with a sitting female figure, is in the modern Nāgarī, and is probably the latest of the Kansuj coins. The early Muhammeden coins of Sabaktagīn, Mahmūd, etc., frequently have a partial admixture of Nāgarī, which will aid in locating the rest; for while this provoking dearth exists with regard to Hindū coins, we find coins with legible names and Hījra dates for the whole line of their Muhammeden conquerors, whose history is amply preserved without their aid.

One confirmation of a historical fact from numismatic aid has been remarked in the discovery of the name of Vāsa Deva or Bas Deo on a Sassanian coin. Ferishta states, that Bas Deo, of Kanauj, gave his daughter in marriage to Bahrām of Persia, A.D. 330;—the coin marks exactly such an alliance; but the Hindū chronicles admit no such name until, much later, one occurs in the Mālwa catalogue of Abū'l-Fazl.

In the dynasties of Nepāl and Assam, (at least from the middle of the seventeenth century), we have been wholly guided by coins in our possession; and it might be possible, by persevering search, to obtain from the same source the names of many Rājas antecedent to this period, which are now doubtful or wholly unknown.

From the time of the subversion of the Moghal empire in the middle of the last century, the historical train of their coins ceases to be available; all the native states having, in imitation of the English, struck their money in the name of a nominal sovereign of Dihli, with no regard to dates, or even to the existence of the monarch; and up to the present time, we have had the names of Muhammad Shāh, Alamgir II., and Shāh 'Alam, issuing simultaneously from the native and the Company's Mint, while a second Akbar sways the pageant sceptre of the seven climes.

It must be confessed that a large field still remains open, for the re-investigation of the middle ages of Hindū history, in judicious

<sup>1</sup> See 'Jour. As. Soc. Beng.', vol. iii. p. 495.

lands; for independently of the new materials now before us in the numerous coins lately discovered, and in many new inscriptions, we have the aid of the foreign histories of Ceylon, Ava, Tibet, and China; we have access to the native volumes before only consulted through interested pandits; and we have Col. Tod's ample traditions and real archives of the principal portion of the Indian continent, the seat of all its important history. To say nothing of the minute and circumstantial numismatic histories of Greece and Rome, it is principally to coins that we owe the history of the Arsacids of Persia, through Vaillant's investigation. The Sassanian dynasty has also been illustrated from similar materials by Fraehn and De Sacy. Marsden has extended the same principle to the Muhammadan princes of Persia and India, and to some few Hindú states, in his '*Numismata Orientalia*;' and its application may be still further urged in the latter line with the greater success, in proportion to the greater dearth of other materials for history, as is exemplified in the coins of the Bactrian provinces. The first thing to be done will be to expunge and lose sight of the learned but entangled accounts of Colonel Wilford and others, which, while they have confused, have frightened critics at the perplexity of the subject. The three Vikramādityas, and three Rājā Bhojas, invented to reconcile discrepancies in dates, will perhaps be found as little needed as the multiplication of Buddhas, the two principal of which are now seen by the identity of their biography to be the same personage.

Of the confirmation of the testimony of inscriptions by that of coins, we have remarkable instances in the Chandragupta and Samudragupta of Kanauj, names first discovered on the Allahabad pillar, and now fully made out, along with several others of the same dynasty, on the gold coins found in the ruins of that ancient town. In no other record have we any mention of these sovereigns,<sup>1</sup> who must have been several centuries anterior to Chandra Deva, the founder of the last reigning dynasty, which was overthrown by the Muhammadans.

The native dates of events, as has been already stated, are most vague and uncertain: still there are instances in which they have undergone further perplexity from their European commentators.

The looseness with which the chronology of the Paurāṇic genealogies has been investigated, is pointed out in Mr. Wilson's remarks on the '*Vishnu Purāṇa*,' the authority whence Sir Wm. Jones' list was furnished by his pundit ('*Jour. As. Soc. Beng.*', vol. i. p. 437). By some mistake he gave 345 years to the Kāṇva dynasty of four Rājas, and in this he was blindly followed by Wilford and Bentley, both professing to consult the original. Now all the manuscripts examined by Mr.

<sup>1</sup> [See vol. i. p. 225.]



Wilson give only 46 years. Indeed, when the epoch of Chandragupta is adjusted, the periods given in this 'Purāṇa' from Parikshit (a.c. 1400) down to the termination of the list in a.d. 436, are quite rational.

A more glaring instance of error, sanctioned, nay almost perpetuated, by the extent to which it has been spread, has originated in blindly following the authority of the pioneers of our Sanskrit researches; and it is strange that it has never been detected, that we are aware of, up to the present day. We allude to the mode of converting the Samvat of Vikramāditya into the Christian era, by subtracting 56 instead of 57, thereby inducing a constant error of one year in all dates of chronicles, deeds, and inscriptions so read. We have taken some trouble to trace the origin of this mistake from curiosity, and it shows how subject we are to rest upon the assertions of others without duly scrutinizing the data on which they may be grounded.

Vikramāditya died in the Kali Yuga year 3044, according to Wilford, whose essays in the ninth and tenth volumes of the 'Asiatic Researches' contain the fullest information on the history of the three supposed princes of this name, and of their common rival Śālivāhana. The first Samvat, therefore, concurs with the year 3045 a. r.; and to convert the latter into the former, 3044 must be uniformly deducted. This calculation agrees with Warren's 'Kāla Sankalita,' (see p. 157, and Table), also with Abū'l-Faṣl's statement, that 'in the fortieth year of Akbar's reign (A. H. 1003, commencing 5th Dec. 1594, and ending 25th Nov. 1595, a. d.) there had elapsed 4696 years of the era of Yudhisṭhira (Kali Yuga),' making its commencement, 3101, a. c.

Also 1652 years of the era of Vikramāditya (1652-1595 = 57, a. c.) and 1517 years of the era of Śālivāhana (1595-1517 = 78, a. d.).

The Bengālī Almanacs, published at Nadiyá, give precisely the same agreement.<sup>1</sup> The Almanac of the Šādar Dewānī, and the statements at the head of all the regulations of Government, coincide therewith: thus, the Samvat year 1877 began on the 15th March, 1820 = 57 years difference. If farther evidence is required of the knowledge of the true era in possession of English authors, we have in Buchanan's 'Mysore,' vol. iii., p. 112:—'3786 years of the Kali Yuga had now elapsed, of which the particulars are, 3044 years of Yudhisṭhira,

135 years of Vikrama,  
607 years of Śālivāhana,

---

3786 E. Y., or A. D. 685.'

<sup>1</sup> One Bengālī Almanac, however, printed in Calcutta, which was brought to us for comparison, had both the Samvat and Śaka era one year in defect; the Bengālī Śak being the only era now used in Bengāl, little care is taken in regard to the rest. The Kali Yuga, the foundation of all, was, however, correct.



Here the interval between 3044, whence the Samvat commenced, to the Saka, is 135, or  $57+58$  years; (or  $135-685-607=57$ ).

Again, Dr. Hunter, in his account of the astronomical labours of Rājā Jai Singh, dates them in '1750 Samvat, or 1693 A.D.,' making the interval 57 years.

Sir William Jones, residing in Calcutta, where the Samvat is not used, in his speculations on Hindū chronology, only alluded to the Kali Yuga. Davis, in his account of the native method of eclipse calculations, used the Saka only; but he frequently alluded to the Kali Yuga, the first year of which he correctly placed in 3101 A.C.

Whence then can the now common, nay, almost universal, application of the subtrahend 56 have proceeded? Simply from Wilford's having placed the Kali Yuga epoch in 3100, instead of 3101 A.C., in his essay expressly written to settle the eras of Vikramāditya and Śālivāhana, to which too much confidence has been given by subsequent writers. Having everywhere assumed this erroneous datum, it followed that the Samvat epoch, which he rightly placed 3044 after Yudhishtira, would concur with  $3100-3044=56$  A.C.<sup>1</sup> But whence did he get his erroneous epoch of the Kali Yuga? This also we may conjecture, having already seen him convicted, on another count, of blindly adopting Sir W. Jones' data. Sir William, in his 'Essay on Hindū Chronology' ('As. Res.' vol. ii., p. 126), says, '4888 years of the Kali Yuga are passed up to the present time;' and his table of comparative epochs is calculated from 1788, A.D., leaving an obvious difference of  $4888-1788=3100$ , A.C., which Wilford seems to have adopted. Had he, however, looked to the heading of the article, he would have found the date 'January, 1788,' consequently the Kali Yuga year commencing in April, 1787, had not yet expired: the true difference therefore was  $4888-1787=3101$ , or more exactly  $3100\frac{1}{2}$  years; or, for the Samvat,  $56\frac{1}{2}$ , in the nearest round terms 57.<sup>2</sup> (See p. 157.)

Wilford is not the only author who was thus led to adopt the wrong equation. Colebrooke and Wilson always use 56. Jervis's Chronological Tables have the same interval; and Colonel Tod employs it throughout his voluminous chronicles of the Rājputs, thereby throwing all his events forward one year, excepting such as fall in the

<sup>1</sup> In a previous part of the very same volume, p. 47, Wilford had used 57. In some places he makes the epoch of the Kali Yuga 2001 instead of 3101.

<sup>2</sup> There is another advantage in adhering to the difference 57 in general terms rather than the now corrector number, 56½, namely, that before the year 1752 it was customary, in England and most parts of Europe, to commence the year in the month of March, or on the Easter moon; so that for all dates anterior to that period the European year may be accounted to have agreed with the Hindū luni-solar reckoning precisely.

months Pausha, Māgha, Phālgun, and half of Chaitra, subsequent to A.D. 1752. He himself notices here and there a discrepancy of one year with the Mussalmán historians, which is generally attributable to this cause alone.

Captain Fell always uses the correct formula, having had access to native almanacs or to pandits. Mr. Stirling, in his 'Account of Orissa,' has the right epoch of the Kali Yuga; but he applies a wrong equation (+ 77) to the Saka era of his Orissa rajas. It is possible that this may be the mode of reckoning in that province; for we find the Saka vary a year or two also in Burmah and Java, if these variations are not indeed attributable to our English references; for, as we have seen above, they are by no means infallible!

The term Samvat does not apply exclusively to the era of Vikramāditya. Colebrooke first corrected this erroneous supposition in regard to the Samvat of the Gaur inscriptions, which probably commenced with the Bhupāla dynasty, about 1000 A.D. Colonel Tod has also established the fact of a Balabhi Samvat in Gujarāt, dating in 318 A.D., and a Siva Singha Samvat, in the same country, coinciding with 1113 A.D. This circumstance must be particularly attended to in examining ancient documents.

Kirkpatrick mentions that Raghava Deva introduced the Samvat era into Nepál; adding, that the Newār era is, however, generally used there, its origin being unknown. Now in the list of Nepál rajas, from Hara Singha Deva, A.D. 1323, back to Raghava Deva, there are but three reigns of extravagant lengths, viz., of 88, 85, and 80 years: if these be cut down to the usual average, the date of Raghava will fall about 880, which is the epoch of the Newār era, so that in all probability the term Samvat in this case merely applied to the latter era, and not to that of Vikramāditya.

It is frequently the custom in eastern authors to estimate dates backwards from the epoch of the writer or compiler. Thus, in the Buddhist chronology of Tibet, translated in M. Caoma's 'Tibetan Grammar,' we find, 'from the incarnation of Shākya 2647 years,' meaning anterior to A.D. 1686. In these cases, and particularly where time is estimated in cycles, great caution is necessary in fixing the initial date, and it is not improbable that from this source has arisen much of the confusion of Hindú chronology; as, for instance, from throwing back the origin of the Kāla-chakra system, or Jovian cycle of sixty years, which is traced (see page 161) to the year A.D. 965, as far as regards its introduction into India. Individual inaccuracies are hardly to be wondered at where events are chiefly chronicled from after-recollection. Thus the bard Chand is 100 years out in one place, according to Tod. Amír Khén's 'Biography' is one year out for a

long period, and endless instances of the same inaccuracy might be adduced. The Muhammadans are generally very particular in their dates, and so are the Hindûs where they inscribe a deed on brass;—in this case they frequently allude to some eclipse or full moon, the act of donation being more pious for its occurrence on a religious festival.

It is hardly necessary to enumerate the authorities for the different catalogues to which we may now proceed, since they will be mentioned under each dynasty: but it may be as well to premise that *A. A.* against a name or date denotes *Ayin-i-Akbari*; *F.*, Ferishta's history; *J.*, Jones; *W.*, Wilford; *B.*, Bentley; *T.*, Tod; *H.*, Hamilton; and *W.*, Wilson.

All dates have, for uniformity sake, been expressed in Christian years, which can readily be converted into the various native reckonings by the rules given in page 172.

As a convenient preface to the mythological catalogues of the Solar and Lunar dynasties, a tabular sketch of the Hindû Theogony, with a few additional memoranda regarding their sacred works, etc., have been inserted. For more ample details on this subject, Moore's '*Hindû Pantheon*,' and Coleman's '*Mythology*,' or the standard work of Ward on the Hindûs, may be consulted; while, for the Puranic genealogies at length, the elaborate tables published by Dr. Hamilton, at Edinburgh, in 1819, although inconveniently expanded in dimensions, will be found the most complete and authentic reference. The tables of Sir William Jones, Wilford, and Bentley, in the '*Asiatic Researches*,' have the addition of dates; but, as before remarked, these are hardly admissible in the earlier periods of fabulous history.

In regard to the tables of the Muhammadan sovereigns, it has been thought sufficient, as their history is so readily accessible, to insert merely their names and titles at length, to facilitate the identification of coins, etc., where frequently only a part of the title is visible. To connect the line of these intruders into Hindûstân, it was also unavoidable to carry back the list to the Persian, the Arsacidan, Syrian, and Bactrian monarchies; for, although properly speaking beyond the limits of India, their history is, from the time of Alexander, continually mixed up with that of the rich and fruitful country so constantly the prey to their invasions and plunder.

TABLE XV.—*Hindú Theogony.*

## 1. THE INFINITE ALMIGHTY CREATOR, OF THE VEDAS, BRAHMA.

The Hindú Trinity, or Trimurti ...	Brahmá.	Vishnu.	Siva.
Their consorts .....	Saraswati, Sakti, or Miyá.	Lakshmi, Padmá, or Sri.	Parvati, Shawari, or Durgá.
Their attributes .....	Creator.	Preserver.	Destroyer.
Their attendant vahna, or vehicle .....	Hansa, a goose.	Okroda, bird.	Nandi, bull.
Their symbols .....	Time.	Water.	Fire.
Their stations .....	Mara.	The Sun.	Jupiter.
Their common titles, A U M .....	Paraméswara.	Nariyana.	Mahádeva.
Figure under which they are worshipped .....	Mortally.	Sáligram and 9 Avalokita	The Lingam, under his million epithets.
Analogues in Western Mythology .....	Saturn.	Jupiter.	Jupiter.

## 2. OTHER MEMBERS OF THE HINDÚ PANTHEON, AND THEIR SUPPOSED ANALOGUES IN WESTERN MYTHOLOGY, ACCORDING TO SIR WILLIAM JONES.

Saraswati .....	Minerva, patroness of learning, etc.	Valterias .....	The river Styx.
Ganesa .....	Janus, god of wisdom.	Durgá .....	Io.
Indra .....	Jupiter, god of firmament.	Náráda .....	mercury, music.
Varuna .....	Neptune, god of water.	Krishna .....	Apollo.
Prithivi .....	Cybele, goddess of earth.	Shawari .....	Venus.
Vishvakarma .....	Vulcan, architect of gods.	Kali or Durgá .....	Proserpine.
Kartika, or Skanda .....	Mars, god of war.	Agni .....	Valcan, fire.
Kama .....	Cupid, god of love.	Svíthá .....	Vesta (his wife).
Surya, or Arka .....	Sol, the sun.	Aswini-kumará .....	Caster and Pollux.
Hanuman, son of Parana .....	Pan, the monkey god.	Arya .....	Aurora.
Rama .....	Bacchus, the god of wine.	Aswadeva .....	Diana.
Yama .....	Pluto or Minos.	Kartika .....	Plutus, god of riches.
Hiranyaka .....	Hercules.	Ganga .....	The river Ganges.
Aswicalaps .....	Esculapius? (god).	Váya .....	Nichas.
		Sri .....	Ceres.
		Anna Parana .....	Anna Perenna.

## 3. THE TEN BRAHMANÍCAS, CHILDREN OF BRAHMÁ, OR TRAJÁPATIS, LORDS OF CREATED BEINGS.

1 Marichá .....	Morality.	8 Krita .....	Pity.
2 Atri .....	Decency.	7 Daksha .....	Ingenuity.
3 Angirasa .....	Charity.	6 Vasishtha .....	Emulation.
4 Pulastya .....	Patience.	5 Bhridga .....	Humility.
5 Pulaha .....	Pride.	10 Náráda .....	Reason.

## 4. THE SEVEN MENUS OF THE PRISTINE CREATION.

1 Swayambhuva, Adam? 4000, B.C.	5 Haivata.
2 Swárochesha.	6 Chakrabasta.
3 Uttama.	7 Vaiswata or Satyawata, Noah? 2550, B.C.
4 Tamasa, Chao, Thamas of Egypt?	

## 5. THE SEVEN RISHIS, SPRUNG DIRECT FROM BRAHMĀ.

1 Kasyapa, Muni.	5 Gautama.
2 Atri, Muni.	6 Jamadagni.
3 Vasishtha.	7 Bharadvaja.
4 Visvamitra.	

## 6. THE TEN AVATĀRAS, OR INCARNATIONS OF VISHNU.

1 Matsya ..... The fish.	7 Riksha..... Of the solar race.
2 Kurma ..... The tortoise.	8 Krishna.... Of the lunar race.
3 Varaha ..... The boar.	9 Buddha... Of the Buddhists.
4 Narasimha... The lion.	10 Dharmadikshana or Kalki-avatār, to appear at the close of the Kali Yuga.
5 Vamana..... The dwarf.	
6 Purandara, Son of Jamadagni	

## 7. THE ELEVEN RUDRAS, OR FORMS OF RIVA.

1 Ajakapada .....	_____
2 Ahirvudhna.....	_____
3 Virupaksha.....	_____
4 Sureswara .....	_____
5 Jayanta .....	_____
6 Bahuripa .....	_____
7 Tryambaka.....	_____
8 Aparajita.....	_____
9 Savita.....	_____
10 Hara .....	_____
11 Ishta .....	_____

The names are differently  
given in the 4 Bhāgavats.

Mahua.  
Hama.  
Dawa.  
Aja.  
Kawati.  
Ugra.  
Bhama.

## RUDRAS ACCORDING TO THE HARIVAMSA.

1 Mrigavyadha.
2 Sarva.
3 Nirriti.
4 Ajakapad.
5 Ahirvudhna.
6 Pinakin.
7 Aparajita.
8 Iluvana.
9 Isvara.
10 Kapalin.
11 Shama.
12 Bhava. (J.P.)

## 8. THE EIGHT VASUS; A KIND OF DEMI-GOD.

1 Dhava.	5 Anula, or wind.
2 Drava.	6 Anala, or fire.
3 Soma, the moon.	7 Prathvaha.
4 Vishva.	8 Prabhava.

## 9. THE TEN VISHWAS, A CLASS OF DEITY WORSHIPPED IN FUNERAL OBSEQUES.

1 Vasa.	6 Kima.
2 Satya.	7 Dhriti.
3 Kratu.	8 Kuru.
4 Daksha.	9 Pururava.
5 Kala.	10 Madhava.

## 10. THE EIGHT DIKPALAS, GUARDIANS, AND THE EIGHT DIKPAJAS, LORDS, OF THE CARDINAL POINTS.

1 Indra..... East.	1 Surya..... The Sun.
2 Agni (or Vahni) ..... South-east.	2 Sukra..... Venus.
3 Yama..... South.	3 Mangala ..... Mars.
4 Nirriti ..... South-west.	4 Rahu ..... Asc. node.
5 Varuna..... West.	5 Sani ..... Saturn.
6 Marut (Vayu, Pawan).. North-west.	6 Chandra ..... The Moon.
7 Kuvera ..... North.	7 Buddha..... Mercury.
8 Isana (Prithivi) ..... North-east.	8 Vrihaspati..... Jupiter.

11. THE TWELVE ADITYAS; MONTHLY NAMES OR EMBLEMS OF THE SUN.

1 Varuna.	7 Gahvasti.
2 Surya.	8 Yama.
3 Vudanga.	9 Svarnavata.
4 Bhāna.	10 Divakara.
5 Indra.	11 Mitra.
6 Ravi.	12 Vishva.

ADITYAS, ACCORDING TO THE KARIYANNA.

1 Dhatri.	7 Indra.
2 Aryaman.	8 Vivasvat.
3 Mitra.	9 Pusan.
4 Varuna.	10 Tvashtri.
5 Ansa.	11 Savitri.
6 Bhaga.	12 Vishva.

12. THE TWENTY-SEVEN NAKSHATRAS, DAUGHTERS OF DAKṢHA, OR LUNAR MARRIAGES.

1 Ashvini.	10 Maghā.	19 Mṛghā.
2 Bharani.	11 Purva Phalguni.	20 Purva Ashvina.
3 Kṛtikā.	12 Uttara Phalguni.	21 Uttara Ashvina.
4 Rohini.	13 Hasta.	22 Śravana.
5 Mrigashira.	14 Chitra.	23 Dhanishtha.
6 Ardra.	15 Swati.	24 Śatabhisha.
7 Punarvasu.	16 Visakha.	25 Purva Bhādrapada.
8 Pushya.	17 Anuradha.	26 Uttara Bhādrapada.
9 Asleṣha.	18 Jyeshtha.	27 Mṛṛāṣi.

13. THE NAMES OF BUDDHA.

Buddha, Sākya-muni or Śinba, Gautama, Tathāgata, Mahā-aramaṇa; Saubhōdasi, from his father Saubhōdhan; Ashvamedha, or Kineman of the Sun; Māyā-devi-anta, or child of Māyā.

Bud, of the Musulmans.  
 Buddas and Seruammas, of the Greeks.  
 Mercurius Maye Elias, of the Romans.  
 Bud or Wud, of the Pagans Arabs.  
 Woden, of the Scandinavians.  
 Toth, of the Egyptians.  
 Fu, Foo, or Fo-hi, and Sa-ka, of the Chinese.

Foot, of Siam.  
 Sumnerokodan, of ditto.  
 Godama, of Ava.  
 Kōboku, of Japan.  
 Chakabont, of Tonquin China.  
 Chom-din-din, } of Tibet.  
 Tenge-gyue, }

*Buddha System of Theology.*

Adi-Buddha, the Supreme Being, created by Shyan five divine Buddhas, who are quiescent, viz. :—

1 Vairocana Akshobhya.	Each of whom produced from himself his son, or Bodhisattwa,	1 Samanta Bhadra.
2 Ratna.		2 Vajra Pani.
3 Sambhava.		3 Ratna Pani.
4 Amitabha.		4 Padma Pani.
5 Amogha Siddha.		5 Visha Pani.

The Buddhist Triad, or mystic syllable A U M, is interpreted :—

A, the Vija mantra of the male Buddha, the generative power.  
 U, ditto of the female Dharma or Adi Prajñā, the type of productive power.  
 M, ditto of Saṅga, the union of the essences of both.

*The seven names or earth-born Buddhas.*

1 Vipasya.	5 Kṛṣṇa Muni.
2 Sikhi.	6 Kaṇva, and.
3 Vireva Bhū.	7 Sākya Sinha.
4 Karkut Chand.	Arya Maitri, the future Buddha.

## 14. THE TWENTY-FOUR JINAS OR TIRTHANKARAS, OF THE JAINA.

	Where born.	Where died.
1 Adināth or Rishabhānāth .....	Ayodhya.	Gujarat.
2 Ajibhānāth .....	"	Mt. Sikkhar (Ind.
3 Sambhānāth .....	Sāwanta.	Parasnāth.)
4 Abhinandanānāth .....	Ayodhya.	"
5 Samabānāth .....	"	"
6 Padmaprabhānāth .....	Kanumbhi.	"
7 Suparswanāth .....	Besaoor.	"
8 Chandraprabha .....	Chandrapur.	"
9 Suridhanāth or Prabhānāth .....	Kakandrapuri.	"
10 Sitalanāth .....	Hindolpur.	"
11 Sri Ananāth .....	Sindh.	"
12 Vasopādya .....	Champapuri.	Champapuri.
13 Vimalanāth .....	Kanungapuri.	Mt. Sikkhar.
14 Anantanāth .....	Ayodhya.	"
15 Dharmānāth .....	Ratanpur.	"
16 Santanāth .....	Hastinapur.	"
17 Kuntanāth .....	"	"
18 Arunāth .....	"	"
19 Mallināth .....	Mithila.	"
20 Munisuvrata .....	Balgrha.	"
21 Nemānāth .....	Mithila.	"
22 Namināth .....	Dwarka.	Mt. Githara.
23 Parswanāth .....	Besaoor.	Mt. Sikkhar.
24 Vardhamāna or Mahāvīra Swāmi	Chitrkoot.	Pawapuri.

## 15. THE SAPTA DWIPAS OR DIVISIONS OF THE ANCIENT WORLD, RULED BY THE SONS OF PRITHAKATA, KING OF ANTIKETA.

Oldest Division.		Newer Division.
Jambudwipa .....	India.	Jambudwipa ... India.
Angadwipa .....	Nepal?	Prakadwipa ... Asia Minor, W.
Yamadwipa .....	Assam, Ava?	Sakadwipa ... Ceylon? W.
Yumadwipa .....	Malaya.	Kushadwipa ... Assyria, Persia, etc.
Bauhadwipa .....	Africa.	Kerachadwipa ... Near the Baltic? W.
Kashadwipa .....	Assyria.	Sakadwipa ... Part of Kushadwipa,
Varchadwipa .....	Europe.	Britain? W.
		Prakadwipa ... Part of Kushadwipa,
		Ireland? W.

## 16. THE FOUR VIDAS.

1 The Rig veda.	3 The Sama veda.
2 The Yajur veda.	4 The Atharva veda.

## 17. THE FOUR UPAVEDAS.

1 The Ayush .....	Medicine.	2 The Dhanush .....	Warfare.
2 The Gandharva ...	Music.	4 The Shikhatya ...	Medicines.

## 18. THE SIX ANGAS, OR BOOKS OF LEARNING.

1 Siksha .....	Pronunciation.	4 Khanda .....	Procedury.
2 Kalpa .....	Religious acts.	5 Jyotish ...	Astronomy.
3 Vyākaraṇa ...	Grammar.	6 Nirukta ...	Interpretation of Vedas.



## 19. THE FOUR UPĀNGAS.

1	Purāṇa .....	History, comprising the eighteen Purāṇas.
2	Nyāya .....	Logic, and the principles of knowledge.
3	Mīmāṃsā .....	Religious principles and duties.
4	Dharma śāstra .....	Law, human and divine.

## 20. THE HUNDRETH PURĀṆAS.

1	Brahmā-purāṇa.	10	Nārada.
2	Padma, or lotus.	11	Skanda.
3	Brahmāṇḍa, egg of Brahmā.	12	Mārkaṇḍeya.
4	Agneya, or Agni, fire.	13	Bhaviṣya, prophetic.
5	Vaiṣṇava, or Viṣṇu-purāṇa.	14	Matsya, or the fish.
6	Gāruda, Viṣṇu's bird.	15	Varāha, or boar.
7	Brāhma-vaiṣṇava, or transformations of Kṛṣṇa (as the supreme).	16	Kṛmā, tortoise.
8	Śaiva, or of Śiva. [Vāyu replaces it.]	17	Vāmana, or dwarf.
9	Linga-purāṇa.	18	Śrī Bhāgavata, or life of Kṛṣṇa.

## 21. THE SIX PRINCIPAL ŚAKTS OF THE ŚIKHĪS.

1	Śaiva.....	Worshippers of Śiva, in his thousand forms.
2	Valmiki .....	Viṣṇu.
3	Sauriya .....	Surya, or the Sun.
4	Gāṇpatya.....	Gaṇeśa.
5	Sakta.....	Bhakti, or devotion.
6	Bhāgavata.....	Who recognise all five divinities as really.

## PAURĀNIC GENEALOGIES.

TABLE XVI.—*Descendants of Sudāmanuṣa, the first Manu, King of Brahmanvarta, and progenitor of mankind (Adam ? J.), according to the 'Bhāgavat Purāṇa,' H.*

[Professor Wilson (Preface to 'Viṣṇu Purāṇa') reviews in detail the date and authenticity of the 'Bhāgavata Purāṇa;' his conclusions on these subjects may be gathered from the following quotation :—

'The statement of the text is of itself sufficient to show that, according to the received opinion of all the authorities of the priority of the eighteen Purāṇas to the Bhāratas, it is impossible that the 'Śrī Bhāgavata,' which is subsequent to the Bhāratas, should be of the number. . . . There does not seem to be any other ground than tradition for ascribing it to Vopadeva, the grammarian; but there is no reason to call the tradition in question. Vopadeva flourished at the court of Hemādri, Rājā of Devagiri, Durgur, or Dowlatabad, and must consequently have lived prior to the conquest of that principality by the Mahomedans in the 14th century. The date of the 12th century, commonly assigned to him, is probably correct, and is that of the 'Bhāgavata Purāṇa,' p. 31.]

BRAHMA.  
SWAYAMBHUYA.

UTÂNAPĀDA, King of Bharat- khanda. (From whom descended the Kings of Brakmanarta.)	PRIYAVRATA, King of Anartvada. <sup>1</sup> Aśvinikera, King of Jambudwipa. (From whom descended the Kings of Bharatkhanda.)
Dhruva.	Nabhi.
Vaśara.	Rishabha-deva. <sup>2</sup>
Puruparna.	Bharata.
Vyāshta.	Vridhasena (Sumati, * V. P.).
Sarvatajas.	Devatajit (Indrayanma).
Charusha.	Devadyanma.
Ulnaka.	Parameśthi (Parameśthi).
Angga.	Pritha (Pratibha).
Vena-ulharmaraja.	Pritharta (Pratibharta).
Prithu.	Bhuma (Bhava).
Vijitaswa, or Antardhyana.	Ugatha.
Havirdhama.	Prastha.
Varhishata, or Prachinavarkhi.	Bikha (Prithu).
Pracheta, and 9 brothers.	Prathama.
Daksha Prajapati.	Nakha.
<i>Among whose numerous progeny were</i>	Gaya.
10 daughters, married to Dharmā.	Chitransha (Nara. <sup>3</sup> Succession varies considerably in * V. P. p. 163.)
13 daughters, married to Kaśyapa Muni, the son of Marichi (see Solar race), progenitors of men, animals, vegeta- bles, etc.	Somara.
Danā, mother of evil genii, demons, etc.	Marichi (see Solar race).
Diti, mother of the Dityas, or Asuras.	Bhidama.
Aditi, mother of the gods and Suras.	Madha.
27 daughters, the Nakshatras, married to the Moon.	Vivarrata.
1 daughter, mother of the 11 Rudras, and others of less importance.	Mantha.
	Rasavama.
	Twashta.
	Viraja, and 100 sons, whose names are unknown.

TABLE XVII.—The Surya-*caste*, or Solar Dynasty, collated from the  
lists of Jones, Wilson, Tod, and Hamilton.

Marichi.

Kaśyapa Muni, married Aditi, Daksha's daughter (see Table XVI.).

Vivasvata, or Surya, the Sun.

Scadhadewa, or Vaisvavata (the Sun), King of Ayodhya.

Ishvaku, in the Treta Yuga.—a. n. 3500, J.—2200, T.

<sup>1</sup> Priyavrata was also father of Idhmajabha, King of Pishaka Dwipa; Yagyabahu, of Salmala Dwipa; Hiranvaria, of Kusa Dwipa; Ghritaprihita, of Kramcha Dwipa; Medhatithi, of Saka Dwipa; and Bithotra, of Puskara Dwipa; of whom the descendants are not traced farther than the first generation.

<sup>2</sup> Rishabha-deva was also father of the kings of various other nations, viz.:—Kusa-warta, of Kusa-warta-des; Ila-warta, Brahmi-warta, Malaya, Ketu, Bhadrāsena, Indrapriya, Bidharbha, and Kikata, of demas, or countries, bearing the same names; besides the nine immortal Siddhas,—Kakaya, Hari, Antaria, Prabuddha Pippalasyana, Abirhotra, Dranila, Chumasa, and Karubhajana; also eighty-one Brahmanas, names unknown.

<sup>3</sup> [I do not think it necessary to continue these corrections of mere nominal list of fabulous ages.]

*From whom spring the two Solar Dynasties.*

## OF AYODHYA (ODD).

Vikukshi (did not reign, W.).  
 Kukut'sha, or Puranjaya.  
 Anenas } An-Prithā, T.  
 Prithu }  
 Visvagandhi, Visvagawa, W.  
 Chandra { Ardra, T. W.  
               Bhadra, W.  
 Yuvakawa.  
 Srāva, Svava, H.  
 Virhuch'wa.  
 Dhundhamara, Kavalayawa, W.  
 Drid'hā'wa.  
 Haryas'wa.  
 Nikumbha.  
 Cris'tawa { Varanaawa, T. H.  
               Sankataawa, W.  
 Sonajit, Prasajit, W.  
 Yuvakawa, H. W. *cor.* J.  
 Mādhātā { Surindhu, T.  
               King of Saptadwipa.  
 Purukutsa.  
 Traudasya, *cor.* T.  
 Anasaya.  
 Prithadarwa, W.  
 Haryas'wa, H. W.  
 Praruna, Aruna, H., Vasumāna, W.  
 Trivindhana, Tridhanwa, W.  
 Satyavata, Trāyaruna, W.  
 Svrittha, T., *cor.* J. H. W.  
 Tris'anku.  
 Harischandra, King of India.  
 Rohita, Kohitawa, H.  
 Hārta.  
 Champu, Chenchu, W.  
 Sudōva, *cor.* T. W.  
 Vijāya (his brother; Karm. Pur.)  
 Bharuna.  
 Vrika.  
 Bāhuka, Bahu, W.  
 Sagna, had 10,000 sons.  
 Asamanjasa, only survivor.  
 Asumāsa.  
 Dulipā, W. T. H., *cor.* J.  
 Bhagirat'ha, brought down Ganges river.  
 Sruta.  
 Nābhaga.  
 Ambarisha, T. W.  
 Sindhudwipa.  
 Ayutāyash.  
 Riteperna.  
 Nala, T.  
 Sawakma, W. T. } *cor.* J. H.  
 Saadha.  
 Kalmitshaphāda, W. H., *cor.* J. T.  
 Asuka.  
 Māla, Harikavacha, W.  
 Das'arat'ha.  
 Attabida, Ilivita, W.

## OF MATHELA (TINHU).

Nimi.  
 Janaka, built Janakpur.  
 Udrasa.  
 Nandiverdhana.  
 Suketa.  
 Dewarata.  
 Vrihadretha.  
 Mahabrya.  
 Sudhrita.  
 Dhristaketa.  
 Haryawa.  
 Mara.  
 Pratipaka.  
 Kritiratha.  
 Devanirha.  
 Virata.  
 Mahadhrithi.  
 Dhristirata.  
 Maharajma.  
 Swarnaroma.  
 Haraswaroma.  
 Swadhaja, { Father of Sitā, who  
                   married Rāma, (see  
                   the parallel line of  
                   Ayodhya.)  
 Koshhaja.  
 Dharmadhwa.  
 Kritadhwa.  
 Koshhaja.  
 Bhannama.  
 Satadyumna.  
 Suchi.  
 Sunadhwa.  
 Urdhaketa.  
 Aya.  
 Parajit.  
 Arishtanami.  
 Srutaya.  
 Supanwaka.  
 Chitraratha.  
 Khamadhi.  
 Samaratha.  
 Satyaratha.  
 Upa-guru.  
 Upajupta.  
 Saewanantha.  
 Yagudhana.  
 Subhasana.  
 Sruta.  
 Jaya.  
 Vijaya.  
 Rito.  
 Sunaka.  
 Nitahala.  
 Dhriti.  
 Bahukawa.  
 Kriti.  
 Mahabasi.

This list is imperfect in number, if the father  
 of Sitā, the bride of Rāma, be correctly  
 placed.

## AYUDHYA NĀGAS, continued.

Viśvambha.  
Kṛatwāṅga, Kharibhāṅga, T.  
Dirghabāhu.  
Raghu.  
Aja.

Daśaratha, 2nd W.

Rāma, A.C. 2020, J.,  
950, B., 1100, T.

His brothers,  
Bharata,  
Lakshmana,  
Setroghana.

## DWĀPĀR YUGA OR DEVAEN AGE.

Kusha, Lava, T.  
Aṅgī.  
Nishadha.  
Nabha, or Naba, T.  
Pundarika.  
Kishkindyānaga.  
Dēvanika, Dwarika, W.  
Abhinava, Abhinava, W., Hina, H.  
Kuru, W., *cor.* J. H.  
Pāriputra.  
Dula, W., Dula, H.  
Rama-chhala.  
Ukha, W., *cor.* J. H.  
Vajranabha.  
Arca, *cor.* W. T. H.  
Nugana, Sankhanābhi, W.  
Vidhiti, Vijathitābhi, W.  
Viśvambha, 2nd W., Viśvambha, T.  
Hiranyanābha.  
Pushya, Pushya, H.  
Dhruvānābhi, *cor.* T.  
Sudersana, *cor.* W.  
Agniverma, Apavarma, W.  
Sighra.  
Manu, Maru, W. T. H.  
Prasāruta.  
Sundhi, Susandhi, W.  
Amersana, Amersha, W.  
Mahaswat, Amasana, T.  
Viśvambhāhu, } Viśvambha, T.  
Prasānjit, } *cor.* W.  
Takshaka,  
Vrikshabala.<sup>1</sup>  
Vrikshān'a, n.c. 1300 J.

SOLAR LINE OF VESALA  
(ALSO DESCENDED FROM SHADHA-DEVA.)

Dichta, King of Vesala.  
Nabhaga.  
Dharmadana.  
Vatsapritā.  
Prangya.  
Prasati.  
Khamitra.  
Chandana.  
Bhāṅgavati.  
Rambha.  
Khametra, } *cor.* Vanshita.  
Dharmika,  
Karamdhama.  
Adisha.  
Maruta.  
Dama,  
Rajyavardhana, *cor.* do.  
Buddhiti.  
Nara, *cor.* do.  
Kohla.  
Dharmadana, or Dharmadana.  
Bogavan, } *cor.* do.  
Butha,  
Trivardhana,<sup>2</sup>  
Brahmaja, or Viala, who founded  
Vaisali (Ailshabad).  
Hemachandra.  
Dharmara.  
Sangyan.  
Sahdeva, *cor.* V. L.  
Krisava.  
Sundatta.  
Sundati (ends V. L.)  
Jamsudaya.

[N.B.—The names which are enclosed in parentheses in the sub-joined tables are not to be found in the 'Vishnu Purāṇa.' The orthography of the leading names has generally been adopted and corrected up from that authority.]

As illustrative of the probable date and authenticity of this Purāṇa, I cite Prof. Wilson's careful *review* of the subject :]

'The fourth book contains all that the Hindūs have of their ancient history. It is a tolerably comprehensive list of dynasties and individuals; it is a barren record of events. It can scarcely be doubted, however, that much of it is a genuine chronicle

<sup>1</sup> ['Vishnu Purāṇa,' p. 463.]

<sup>2</sup> His daughter, Brahira, married Viśvarava Muni, the father (by another wife, Nikakha) of Rāvana, the demon king of Lanka, or Ceylon, afterwards killed by Rāma.

of persons, if not of occurrences. That it is discredited by palpable absurdities, in regard to the longevity of the princes of the earlier dynasty, must be granted, and the particulars preserved of some of them are trivial and fabulous. Still there is an artificial simplicity and consistency in the succession of persons, etc. . . . It is not essential to its credibility or its usefulness that any exact chronological adjustment of the different reigns should be attempted. . . . Deducting, however, from the larger number of princes a considerable proportion, there is nothing to shock probability in supposing that the Hindû dynasties and their ramifications were spread through an interval of about twelve centuries anterior to the war of the Mahâbhârata, and, conjecturing that event to have happened about fourteen centuries before Christianity, thus carrying the commencement of the regal dynasties of India to about 2660 years before that date, pp. 64, 65. . . . After the date of the great war, the 'Vishnu Purâṇa,' in common with those Purâṇas which contain similar lists, specifies kings and dynasties with greater precision, and offers political and chronological particulars, to which, on the score of probability, there is nothing to object, pl. 70. . . . The 'Vishnu Purâṇa' has kept very clear of particulars from which an approximation to its date may be conjectured. No place is described of which the sacredness has any known limit, nor any work cited of probable recent composition. The Vedas, the Purâṇas, other works forming the body of Sanskrit literature, are named; and so is the Mahâbhârata, to which, therefore, it is subsequent. Both Bauddhas and Jains are adverted to. It was, therefore, written before the former had disappeared; but they existed in some parts of India as late as the twelfth century at least, and it is probable that the Purâṇa was compiled before that period.'—p. 71.

[I curtail my quotations in this, as in previous instances, precisely where Prof. Wilson ceases to speak from the absolute knowledge contributed by the Sanskrit writings, of which he is *fontis princeps* the exponent.]

RÂJÂ YUGA,—IRON, OR FOURTH AGE, 3101, B.C.

Urushapsa, Urushia, W.	} But they place these eight names imme- diately after Râma.	(Bârhi), Dharmen, W.
Vatsa, W., <i>see</i> J.		Kritanjaya, first emigrant from Kosala
Vatsa, (vidisha) Vyâha, W.		(Oude) and founder of the Suryas in
Prativijaya.		Saurashtra, T.
(Bhânu, <i>see</i> W.)		Ramanjaya.
Divakara.		Sanjaya.
Sahadeva.		Sâkya, W. T. (Sôrka).
(Vira, <i>see</i> W. T.)		Suddhodana, Khaddhodana, W., Sudipa,
Vrihadajaya.		T.
Bhânuratha—Bhânumat, Rahman, Lan-		Râtula, W. <sup>1</sup> (Lângala, Sangala, T.)
ginnans of Persia? T.		Prasenjit.
(Frat'ich's'wa, <i>see</i> W.)		Kahudrika, Hemika, T.
Supratitha.		Kuplaka, W., <i>see</i> J.
Marudeva.		Saratha, Sarita, W., <i>see</i> J.
Sunakshatra.		Sumitra, a.c. 2100, J., 67, T. The last
Kinnara—Pushara.		name is the 'Bhâgavat Purâṇa,' said
Antariksha, Bekha, T.		to be contemporary with Vikrama-
Suvarna, W. (Suta, Sutapas).		ditya? T. from this prince the Mevâr
Amitrâjit.		chronicles commence their series of
Vrihadrâja.		Râjâs of Saurashtra (see Tab. xvi.).

<sup>1</sup> [Râtula, 'Vâya Purâṇa'; Siddhârtha or Pushkala, 'Matavya Purâṇa'; Lângala, 'Bhâgavat Purâṇa.' This and the two preceding names are of considerable chronological interest; for Sâkya is the name of the author or reviver of Buddhism, whose

TABLE XVIII. — *Chandra-rassa, Indu-rassa, or Lunar Race, who reigned in Antarevda and Kāpi; afterwards in Magadhā (Behar), and Indraprastha (Dilli).*

Atri.....	Muni.
Soma .....	(Luna, the Moon).
Budhiha .....	(Mercury) married Ilā, daughter of the Sun.
Ailas, or.....	Pururavas.
Ayu.....	Kings of Kāpi also descended from him (see below).
Nahusha.....	(Devanashusha, Dionysos, Bacchus, Wd.).
Yayāti.....	Father of Puru and Yadu (see next page).

## KINGS OF KĀPI (SENARAS).

Kabotsavridhha, son of Ayu.	Ritadwaja.
Subatra.	Alarka.
Kāpi.	Santati.
Kāpi.	Santata.
Rachtra.	Sukotana.
Digbatama.	Dharmaketo.
Dhanwantra.	Satyaketo.
Ketumana.	Dhruvacheto.
Bhimaratha.	Sakamara.
Divodasa, becomes a Buddhist.	Bukotra.
Dyamaa.	Bhaga.
Prastadan.	Bhargabhumi (end in ' Bhāgavati P.')

## LINE OF PURU.

Puru, king of Prātiśthāna.
Janamejaya, king of Antarevda.
Prochinwut.
Pravira.
Manasya.
Bhayada.
(Sodhyumna.)
(Bahagava.)
Samyāti.
Ahamyāti.
Raudrāva.
Riteya, cor. W.
Rantidra, Rantimara, W.
Tansa, W. (Sumati).
(Rachhi or Anila, cor. W.)
Dushyanta or Dushmanta, husband of Sakuntalā.
BHARATA, king of Antarevda and India.
Vitatha, or Bharadwaja, adopted.
Bhavanmanya.
Vrihatkashtra.
Schotra.

## LINE OF YADU.

Yadu, excluded from succession.
Krotha.
Vrijinava.
Swāhi.
Rishadyu.
Chitraretha.
Saravindu.
Prithuvrasa.
Tamaa, or Dharma.
Uamaa.
Sitoshu, Siteya, W. cor. H.
Ruchaka, Rukshma, W.
Kavalha, W. cor. J.
Pastvraa, line extinct.
Jamodhya, Jyamaagha, W.; from Saravindu by another line.
Viderbha.
Krotha.
Kunti.
Draakhi, Vriakhi, W.
Nirvati.
Dashirha.
Vyama, Vijama, W.

birth appears to have occurred in the seventh century, and death in the sixth century, a.c. (s.c. 621-543). There can be no doubt of the individual here intended, although he is out of his place, for he was the son, not the father, of Buddhodana, and the father of Rahula, as he is termed in the *Amara* and *Haima Koshas*. . . . ' Vishnu Purāṇa,' p. 463.

## LINE OF PURU (continued).

- Hastin, built Hastinapur.<sup>1</sup>  
 Ajamittha, reigned at do.  
 Riksha, do.<sup>2</sup>  
 Samvarana.  
 Kuru, from whom also descended the  
 Magadha princes (see tab. II.  
 and 'V. P.', p. 456).  
 Parikshit, 'V. P.'  
 Jahn.  
 Suratha.  
 Vidhratha.  
 Sarvabhauma.  
 Jayasena, Aravin 'V. P.'  
 (Radhica, Aravi, W.)  
 Ayutayya, Ajita, H.  
 Akrodhana.  
 Devatithi, var. W.  
 Riksha (another son of Akrodhana).  
 (Bhimasena, var. J.)  
 Indira.  
 Pratiya.  
 Santanu.  
 Vichitravirya, married Amba and Am-  
 bika, daughters of the King of  
 Kasi, who have issue, after his  
 death, by his half-brother, Krishna-  
 dwaiipayana or Vyasa, Dhritarashtra  
 and Pandu, whose wives bore the  
 five Pandavas, viz :  
 1 Yudhishthira (see table xix.)  
 2 Arjuna, father of Parikshita (see do.)  
 3 Bhima, no descendants.  
 4 Nakul, and 5 founded the Magadha  
 5 Sahadeva, } line (table xx.)

## LINE OF YADU (continued).

- Jimutra.  
 Vikrami.  
 Bhimaratha.  
 Navaratha.  
 Damaratha.  
 Sakuni.  
 Kusumbha.  
 Devarata.  
 Devakshetra.  
 Madha.  
 Anavaratha.  
 Kuru-vata.  
 Anuratha.  
 Purushota.  
 Arya, Angasa, W.  
 Satwata (several branches).  
 Andhaka, do.  
 Bhajantia.  
 Viduratha.  
 Sura.  
 Sami, Samana, W.  
 Pratikshetra.  
 Swarnabhava.  
 Hridika (several branches).  
 Devamitha.  
 Sura (numerous progeny by Marish).  
 Vasudeva, the eldest, who had thirteen  
 wives.  
 Krishna and Balarama, with whom  
 this line becomes extinct, by quarrel  
 of the Yadus.

## SYNCHRONISM OF THE SOLAR AND LUNAR RACES, T.

- T. { Buddha of the Lunar race married Da, the sister of Ikshvaku, a. l.  
 Harischandra, a. l. cotemporary of Parasurama, of lunar line.  
 Sagara, cot. of Taljanga, of do.  
 Ambarisha, cot. of Gaidhi, founder of Kanauj.

TABLE XIX.—*Pandu Dynasty of Indraprastha, or Delhi, continued from the line of Puru of the Chandra vansa, or Lunar line, and collateral with the Magadha Princes, descending from Jarasandha, of TABLE XX.*

ACCORDING TO THE 'BHAGAVAT PURANA,' E.		ACCORDING TO THE 'RAJAVALL,' T.—['V. P.', 461.]	
Yudhishthira, 1st King of Indraprastha			
—no issue.			
B.C. 3101 J.	Parikshita, son of Arjun (son of Abhimanyu, 'V. P.') succeeds.		Parikshita.
1300 W.	Janamejaya, W.		Janameja.
1100 T.	Satanika		Asmud.

<sup>1</sup> [It was finally ruined by the encroachments of the Ganges, but vestiges of it were, at least until lately, to be traced along the river, nearly in a line with Delhi, about sixty miles to the east.—'V. P.', p. 452.]

<sup>2</sup> [Another son, Kapwa.—'V. P.', 451.]



## 'BRĪHATYAT,' (continued).

(Sahasranika, *see* W.)  
 Aswamehadatta  
 Astmakrishna, Nishakra, W.  
 Nishakra—Nami, king of Hastinapur (capital washed away)<sup>1</sup>  
 Chakra, built Kaushmbei.  
 Ushna, Ukata, king of Kaushmbei, W.  
 Chitraratha.  
 (Kahiratha, *see* W.)  
 Vishnuvata, Dhritimukta, W.  
 Sushena.  
 Mahipati, *see* W.  
 Samitha.  
 Sukthibala { Richa, W.  
                   { Nrichaksha, W.  
                   { (Sukharati), W.  
 Pariplawa.  
 Sonaya.  
 Medhavia.  
 Nripasajya.  
 Meida, W. (Durla).  
 Tigana, W. (Tini).  
 Vrhadnatha.  
 Vasudana, W. (Sudana).  
 Satishka.  
 Udayana, W. (Durdasana).  
 Ahinara, W. (Rahinara).  
 Khandipala, Dandapani.  
 Nimi, Nirumitra, W.  
 Kalamka, *see* W.

## 'RAJAVALI,' (continued).

Ashuna.  
 Mahajana.  
 Jaurita.  
 Dehtwana.  
 Ugarsena.  
 Surabha.  
 Satashama.  
 Rasmareja.  
 Buthil.  
 Sontpala.  
 Narkurdava.  
 Jaurita.  
 Bhupata.  
 Sowama.  
 Molari.  
 Bhavina.  
 Kikan.  
 Putharat.  
 Dasaama.  
 Adolika.  
 Hantavasa.  
 Dandapala.  
 Damsila.  
 Sompala.  
 Khavara, de-  
 posed, and Pn-  
 dalimonded, T.

The 'Rajavali' continues the Indraprastha sovereigns of the Lunar race, through three more Dynasties, Tui, viz. —

SECOND DYNASTY 14, PRINCES, REIGNED  
500 YEARS.

Vaswa (contemporary with Shu-  
 naga ? T.)  
 Surien.  
 Sirosh.  
 Ahangul.  
 Vyerjita.  
 Durlora.  
 Sodpala.  
 Surami.  
 Singraja.  
 Amargoda.  
 Amarpala.  
 Serbhe.  
 Padharat.  
 Madpal, slain by his Rajput minister.

## THIRD DYNASTY.

Maharaja, Maharaja of Perishta ? T.  
 Sridana.  
 Mahipala.  
 Mahivall.  
 Sengarti.  
 Notrashta.  
 Samakdana.  
 Jetmala.  
 Kalanka.  
 Kalmana.  
 Sirmandan.  
 Jeywanga.  
 Hergraja.  
 Hirama.  
 Antisa, resigned to his minister.

[Major Cunningham has investigated this section of the Dhill line with a view to the illustration of certain local coins derived from the

<sup>1</sup> [His son (Asima-krishta's) will be Nishakra, who will remove the capital to Kaushmbei, in consequence of Hastinapur being washed away by the Ganges?—'V. P.', p. 461.]

type of the Bactrian monarch Strato. As the nomenclature varies in the different authorities, and these lists may be held to be fairly within the limits of legitimate history, I append the modifications<sup>1</sup> advocated by that numismatist, as well as those cited by him from 'Ward's Hindûs.'

FOURTH DYNASTY.—TOD.	WARD, Vol. i, p. 24.	CUNNINGHAM, 'J.A.S.B.', vii., 1854.
Sândhwaja.	Dhuranidhara, A.C. 230	Yonadhara.
Mahâsunga.	Samodhata, " 210	Samadhwaia.
Nâda.	Mahiketaka, " 190	Mahisanga.
Jewuna.	Mahayodha, " 170	Mahajodh.
Uliya.	Natha, " 150	Sarma.
Jehala.	Jirasa-râja, " 130	Jirsa-siraj.
Ananda.	Udaya-Sena, " 110	Uday-sen.
Râjphla, invaded Kemon, and killed by Sukwanti, who seized on Indraprashta, whence he was expelled by Vikramaditya, T.	Vindhachala, " 90	Anandajala.
	Râjapala, " 70	Râjapala.
	" 60	Dihl taken by Sakaditya or Sakwanti A.C. 57, retaken by Vikramaditya Sakhi.

TABLE XX.—*Kings of Magadhâ, or Central India, bel. Behar, of the Indu, or Chandra Vamsa, Capital, Râjagriha.*

SAMVATSEYA DYNASTY. (See Table xviii.)	
Kuru.	Vrihadratna, 'V. P.'
Sudhamsh.	Kudera.
Sahotra.	Vrihadhha.
Chayana.	Pudiparat.
Kritaka.	Satyadharita.
(Visenta).	(Urja), Sudhanwan, 'V. P.'
Uparichara—the Vasi.	(Sambhava), Jantu, 'V. P.'

LINE OF PANDU.  
(Brought on from page 237.)

Jarnasodha, col. of Yudhishtira and Krishna, A.C. 3101 ? J.	
A.C. 1400. W. Sahadava, Parikshita born, A.C. 1400, W. Savrita.	
great war ends.	Dharma.
(Marjari), or Somapi, W.	(Nribhrata, Wn.)
Brutavat.	Sosuma.
Ayuthya.	Drishasena, Vrihadseina, Wn.
Niranmitra.	Semati.
Sakshatra.	Suvata, Buddhamva, Wn.
Vrihadkarma.	Sunita.
Semajiv.	Satyajit.
(Brutanjaya.)	Vivrajit.
(Vipra.)	915. Bipunjaya, 700 Wn., a Buddha
(Buchi).	born in his reign, 'As. Res.'
(Kahema).	vol. II., p. 138. <sup>2</sup>

<sup>1</sup> [Derived from a new list, 'obtained from a Purohit in the Punjab']

<sup>2</sup> [Our list, says Prof. Wilson, 'and that of the 'Vâya,' specifies 21 kings after Sahadava; the 'Bhâgavata' specifies 20, and in another passage states that to be the

## SUNAKA DYNASTY, KINGS OF BHARATKHANDA, REIGNED 128 YEARS.

('V. P.' 128 years, p. 465.)

B.C. 915, W. Pradyota, B.C. 760, Wd. 650?	B.C. 915, W. Viskkhayōpa.
'Bud. Chron.' 2100, Jona.	Janaka (Rajasa or Ajasa, Wd.)
Pālaka.	Nandivarddhana (or Takshac, T.)

## SAUNYĀSAS OR S'UNYĀS, REIGNED 360 YEARS.

('V. P.' 362 years, p. 467.)

B.C. 777, W. S'ounyasa, 1602, T.,	B.C. 777, W. (S'malya or Vikhyat, T.)
556, Wd., 471, B. } var. Wd.	412. Nanda, Mahāpadma, 1602, J.,
Kākavarua .....	340, W. 'He will bring the
Kahemadherman.	whole earth under one um-
Kahatranja (Kahetranja).	brilla; he will have eight
Vidmātra (Vidhiakra).	sons, S'malya and others,
Ajātasatru 450, Wd. 451, 'Bud.	who will reign after Mahā-
Chron.' of Ava.	padma; he and his sons will
Darbhaka, Dama.	reign for 100 years. The
Udayakva, Uddai, Ajaya.	Brahman Kautilya will root
Nandivarddhana.	out the nine Nandas.' 'V. P.'
Mahānandi (Mahabali, Wd. 354).	p. 468.

## MAURYA DYNASTY, GOVERNED 127 YEARS.

('V. P.' p. 470.)

B.C. 315, W. Chandragupta Sandracottus	B.C. 315, W. Dhanurtha, var. T. Wd.
of Greeks, 1502 J.	Sangota, Sandrakōta, Wd.
Vindusara, Vindisara.	Sālyaka, Indrapālita, Wd.
Aśoka Varddhana, patron of	(Devadharma, Wd.)
the Buddhists, 330, 'Bud.	Somaverman.
Chron.'	Sandherman (Saidhanwa).
Suryasa, Sujasa, T. Cullita,	Vrihadurtha.
Wd.	

## KUNGA DYNASTY, 110 YEARS.

('V. P.' 112 years.)

B.C. 178, W. Pushyamitra, puts his	B.C. 178, W. Śrīśaka, Abhadma, Wd.
master, the last of the	Badraka, T.
Mauryas, to death,	Pāṇḍaka.
1365, J.	Ghoshavena.
Agnimitra,	Vajrasmitra, (Vikramita, Wd.)
Sujyeshtha,	Bhagavata.
Vasumitra.	Darabhatti.

## KĀṢYA DYNASTY, 45 YEARS. ('V. P.')

B.C. 66, W. The Kaśya named Vasudeva	B.C. 66, W. Nārāyana, Parum, T.
seizes his master's kingdom,	Soyarsen. (Wilford supposes
1253, J. var. T.	interval of 160 years before
Rhāminitra, son of Vikramā-	Sipraka.)
ditya, T.	

number. My copy of the 'Mateya' names but 19, and the 'Radcliffe' but 12; but both agree in making the total 52. They all concur with the text also, in stating that 1600 years had elapsed from the great war, at the death of the last Vardhadratha prince; and this is more worthy of credit than the details, which are obviously imperfect.' 'V. P.' p. 465.]

[ Cf. also 'Burnouf,' vol. ii. p. 778; 'Huen Tsang Mémoires,' p. 179; 'Bhāgavata Purāṇa,' xii., i. p. 12.]

[ 'Buddha Gaya Inscr.,' 'Jour. As. Soc. Beng.', vol. vi. p. 671, 'Jour. Roy. As. Soc.', etc.]

TABLE XXI.—*Āndhra or, Friapala dynasty, of Āndhra (Orissa?) or Telūgana, in continuation of the Magadha line.*

(See Wilford's comparative list from the 'Bhāgavat, and three other Purāṇas, in the 9th vol. of 'As. Res.'). [These thirty Āndhra Bhṛitya kings will reign 456 years.—'Vishnu Purāṇa.' Prof. Wilson adds in a note.—'The 'Vāyu' and 'Bhāgavata' state also 30 kings and 456 years; the 'Matsya' has 29 kings and 400 years. The actual enumeration of the text gives but 24 names; that of the 'Bhāgavata' but 23; that of the 'Vāyu' but 17. The 'Matsya' has the whole 29 names, adding several to the list of our text ('V. P.'), and the aggregate of the reigns amounts to 435 years and six months.]

<p>n.c. 21. Sīpraka, 'a powerful warrior of Suvarṇa, kills the latter and founds the Āndhra bhṛitya dynasty,' Balin, Balhita, n.c. 908, J. A.D. 190, Wd.<sup>1</sup></p> <p>Kṛishṇa Śrī Sātākarni Pūrṇomangṇa, Purnamānā } var. Sātākarnā, II. } W. Lambudara Ivīlaka, Apilica, Wd. Megha Svāti Pulimāt. Aśhṭākarmā, var. Bhāg. Purāṇa. Hūla. Tālaka, Tūlā, T. Pravikṣma. Sundara, named Sātākarnā.</p>	<p>n.c. 21. Chakura Sītākarnā Sivasthī Gomatiputra, (Gautami, Wd. A.D. 590). Pulimāt, Pulimāt (Sātākarnā IV. var. Bhāg. Purāṇa). Sivasthī. Sivasthī. 408. Yajñasthī, (Yong nai of Chinese? Wd.) Vijaya. A.D. 428. Chandraśrī, (or Vijaya, last Magadha king, 500, J. 640, T.) Pulimāt, Pulimāt (Poulomien of Chinese? Wd. dies, 648, A.D. 648, T. est. of Gupta Rāval of Mewār, A.D. 720 f.)</p>
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TABLE XXII.—*Rājās of Kashmīr, of the Line of Kuru in the Lunar race: worshippers of Nāgas or Snakes.*

[I have scarcely left myself space in this reprint to attempt to unravel the mystifications of the early Kashmīr Chronology. The con-

<sup>1</sup> [Pliny, 'Hist. Nat.', vol. vi. p. 22, 'As. Res.', vol. ix. p. 101. 'Sīpraka is variously named, Sīndhaka, Vāyu; Śvasta; Matsya; Balin, Bhāg; and, according to Wilford, Chāsmata in the 'Brahmandā P.', and Śhadraka, or Śhanka, in the Kumārikā Khanda of the 'Shānda Purāṇa.' . . . If the latter form of his name be correct, he may be the king who is spoken of in the prologue to the 'Mṛichhakatī.' Prof. Wilson, in a valuable notice on the subject, further reviews the various items of evidence bearing on the date of the Āndhras, and arrives at the conclusion that 'the race of Āndhra kings should not commence till about 20 years n.c., which would agree with Pliny's notice of them; but it is possible that they existed earlier in the south of India, although they established their authority in Magadhā only in the first centuries of the Christian era.'—'V. P.', p. 475. Major Cunningham has discovered the name of Śrī Sātākarni among the votive Buddhist inscriptions at Sanchi. He transcribes the original Pāli legend as follows, *Rājase Sīri Sātākarni Arāmaṇa Pāṇṭhī-patana, Anandara dāma*, 'Gift of Ananda, son of the neophyte Vaiśāṇha, in the reign of Śrī Sātākarni.'—'Biblioth. Topogr.' p. 264. The writing itself is referred to the time of the king of this name, third in the Magadhā list, though any such special appropriation of the designation is open to question when we find Prof. Wilson remarking, 'The adjuncts Śvasthī and Śvāstī appear to be conjoined or not with the other appellations, according to the convenience of the metre, and seem to be the family designations or titles.'—'V. P.', p. 474. See also Stevenson, under Saurashṭrā infed, and 'Bombay Jour.', July, 1853.]

jectural results arrived at severally by Prof. Wilson,<sup>1</sup> Captain Troyer,<sup>2</sup> and Major Cunningham,<sup>3</sup> are subjoined in parallel columns for the scrutiny of future inquirers. Prof. Wilson, without according any great faith to the Sanskrit authority, from which his outline of the history of Kashmir was translated, contented himself with leaving it to carry its own weight. The succeeding commentators have exercised less reserve in the adaptation of the original materials, and hence their rectifications demand a more distinct review. I should naturally desire to abstain from the use of any harsh expression in referring to the exhaustive labors of M. Troyer; but, in truth, I can scarcely bring myself to notice his arguments with much seriousness; and this feeling will, perhaps, be better understood when I say that we are invited to believe that Apoka reigned in 1436 A.D. (vol. ii., p. 435), and that the Scythian Kanishka ought to be dated in the 13th century, A.D. Equally must the author's endeavor to account for the extraordinary lengths of reigns be received with distrust, which line of reasoning is appropriately climaxed by an attempt to show that it was possible that Ranāditya lived and even reigned 300 years (vol. ii. p. 379).

Major Cunningham's ratiocination towards the general settlement of the relative epochs is based primarily upon the assumed fact of Hiranya and Toramāna having been contemporaries of the 3rd Vikramāditya of Ujjain (A. 466 = A.D. 409),<sup>4</sup> whom the author, in preparatory training for the more complete development of the same idea in his subsequent works,<sup>5</sup> identified with the Chandra Gupta of the Gupta coin series, and the 3rd Vikramāditya. I do not at all wish to contest that there may have been one of the many monarchs who assumed the supplementary titular designation of Vikramāditya ruling over Malwa at or about this period, and that the potentate in question may well have been a contemporary of Toramāna of Kashmir, whom, judging from the style of writing on his coins, I should not desire to place so early as Wilson and Troyer have done; but this concession by no means implies an accord with the other portion of the argument, that would bring the Guptas down to so modern an epoch as is there proposed. In other sections, Major Cunningham's method of compression is about as summary and as little satisfactory as Troyer's system of expansion, inasmuch as the process of the reduction of the supposed superfluous periods of the Aditya and Gonderiya dynasties is effected by the easy arithmetic of a diminution of the declared totals of *one-half* and *one-third* respectively.

<sup>1</sup> ['Asiatic Researches,' xv., and 'Arima Antiqua,' p. 347.]

<sup>2</sup> ['Rajatarangini,' Paris, 1840.]

<sup>3</sup> ['Numismatic Chronicle,' vol. vi., 1845.]

<sup>4</sup> [Wilford, 'Asiatic Researches,' vol. ix., p. 166.]      <sup>5</sup> ['Bhika Topca,' p. 142.]

There is one point, however, somewhat assuring, that is—the general coincidence of the different commentators in regard to the proper period of the initial date of the Nāga dynasty, and, for the present, we must accept this as the single bright spot in the otherwise hazy atmosphere with which Oriental authors so often envelope the simplest history.]

<sup>1</sup> The Rāja Tarangini, whence this line is taken, commences with an account of the dedication of the valley by Kasyapa Muni: supposed to allude to the Deluge.—Wilson, 'As. Res.', vol. xv. p. i.

## FIRST PERIOD—KAURĀVA RACE, 1265 YEARS.

B.C. 3714. Kashmir colonised by Kasyapa, B.C. 2656, W.	Jaher-khān.
Fifty-three Princes, <sup>1</sup> names omitted by Hindu writers, but partly supplied by Mohammedan authority, as follows:	Nander-khān.
Sulimān.	Bakre-khān, slain by
Cassingham.	Bakre Rāja.
Maherka.	An interval ensues, and authentic history commences with
Baudu-khān, (Pandu of the Lunar line?)	2448. Gomarda, I. Kali Yuga, 653
Lāl-khān.	Gomarda or Agrasā, a relation of Jarasandha, 1400, W. B.C. 1048, P.
Lankar-khān.	Dāmodara, 1st
Sunder-khān, —Hindū worship established.	Gomarda, II.
Cunder-khān.	Thirty-five Princes, names forgotten.
Sunder-khān.	1799. Lava (Baklava), son of Mohammedan historians. B.C. 676, P.
Tunda-khān.	1044. Rāmasāya.
Dadda-khān.	1000. Khagendra.
Mahand-khān.	1600. Suvendra, ent. with Bahman of Persia.
Durbimash-khān.	1572. Godhara, Goddery, A. A.
Deosir-khān.	1537. Survera, Surra, do.
Tehab-khān, dethroned by king of Kabul.	1477. Janara, Jemak, do.
Chālu-khān.	1471. Sachinara, Sujunay, do.
Luvkhab-khān.	1394. Asoka, established Buddhism. (See pages 216, 240, B.C. 200?)
Shermaharim-khān.	1332. Jaloka, adopted caste.
Nareng-khān, conquered China.	1202. Dāmodara, 4th, a Saiva; transformed into a snake.
Durigh-khān.	1277. Hushka, } Tatar prince, re-
Gowashah-khān.	Jushka, } established Budd-
Pandu-khān II. extended empire to the sea.	Kanishka, } him.
Haris-khān.	1217. Abhimanyu, an orthodox Hindū, B.C. 423, W. B.C. 73, P.
Sauril-khān.	
Akber-khān.	

<sup>1</sup> [M. Troyer has the following note upon the subject of these fifty-three princes:—'C'est sans doute par le vague des expressions de Kalhana, et par le récit des écrivains mahométans qui font mention d'autres rois avant Gomarda 1er, que M. Wilson a été induit à placer avant ce roi une première série de cinquante-trois princes, tandis que le texte, comme je crois l'avoir démontré, ne fixe la durée d'aucune autre série avant celle qui précède le règne de Gomarda III. Il errait en effet très-singulier de trouver deux séries consécutives, qui offriraient le même nombre de rois et la même durée de règne. Je suis bien loin de nier qu'il n'ait pu y avoir plusieurs rois avant Gomarda 1er, et j'admets même qu'en à une presque certitude à cet égard; mais le Rājatarangini n'en dit rien de positif.'—Vol. II. p. 371.]

SECOND PERIOD—GONERDIYA DYNASTY, 1013 YEARS, OR 378 YEARS AFTER  
ADJUSTMENT, W.<sup>1</sup>

Troyer, B.C.	CHAKRABARTI, A.D.	WILSON, B.C.		B.C.
1182	55-3 <sup>2</sup>	1182	Gonerdiya, III. Naga worship resumed,	388 W. 108, P.
1147	61-9	1147	Vibhishana,	370
1093-6	73-1	1098	Indrajita,	352
1058		1064-6	Ravana,	334
1028	80-8	1030-6	Vibhishana, II.	316
992-6	86-2	993	Nara (Kinnara); personified Buddhists,	298
952-9	92-2	953-3	Siddha,	280
892-9	114-2	893-3	Upalaksha Adithakshah, A. A.	262
852-3	121-9	892-9	Hiranyaksha, Tarnya,	244
824-8	131-3	825-2	Hiranyaksha, Horvaka,	226
764-8	146-2	765-3	Vasukula, Eleshak,	218
704-8	163-8	705-2	Mihirakula (Mukula, Troyer), invaded Lanka or Ceylon,	200
634-8	178-8	635-3	Vaka,	182
571-8	187-8	572-2	Kahitinaunda (Nandana),	164
541-8	195-2	542-2	Vamunda, Vamund, A. A.	146
489-6	208-2	490	Nara II. or Nara-Nir,	128
429-6	223-2	430	Aksha, Aj,	109
369-6	238-2	370	Gopaditya, a pious brahminist, Kal- yuga, A. A.	82
309-6	253-2	310	Gokarna, Narya, A. A.	64
251-7	269-11	252	Narandraditya, Narandranat, A. A.	46
216-4	279-0 <sup>3</sup>	216-9	Yudhishtira, cured the blind, (see Lanka race ?)	28

ADITYA DYNASTY, 193 YEARS.

167-3	287-6	168-9	Pratipaditya, kinsman of Vicramaditya, 10 W.	
135-3	303-6	136-9	Jalauca, Jaggub,	A. A. 22
103-3	319-6	104-9	Tosajia, a great famine, Banja,	54
67-3	338-6	68-9	Vijaya, Bopery,	90
59-3	341-6	60-9	Jayendra, Chander,	98
22-3	360	23-9	Arya Raja, of miraculous accession, (Sankhianat),	135 400, P.

GONERDIYA LINE RESTORED, 592 YEARS, OR  
423 ADJUSTED.

A.D.	A.D.	A.D.		
24-9	383	25-3	Meghavahana, Megdahan, A. A., invited Dandhan, and invaded Ceylon.	
58-9	400	57-9	Seishtanah, or Pravarsana,	
88-9	418	87-3	Hiranya, contention with Teramans Yu- varka, contemporary with Vicramaditya.	
118-11	436	117-5	Matrigupta, a Brahman from Ujjain, suc- ceeds by election,	471 W.
123-8	432-6	122-2	Pravarsana, invaded Biladitya of Gujarat, (table xvii.)	476
183-8	464	182-2	Yudhishtira II.	490
204-11	483	224-5	Nandiravat, Narandraditya, or Lakshman's	522
217-11	490	237-5	Randaditya, married daughter of Chola Raja,	545
317-11	555-8	537-5	Vicramaditya, supposed an interpolation (Ujjain princes ?)	568
559-11	576-6	579-5	Biladitya, last of the Gonerdiya race,	592

<sup>1</sup> See also 'Ayin-Akbari,' vol. II. p. 164.

<sup>2</sup> The fractional figures express the months of the year to which they are in each  
case appended.

<sup>3</sup> Note, p. 364.



## NĀGA OR KARKUTA DYNASTY, 260 YEARS, 5 MONTHS.

Troyer. A.D.	Carverham. A.D.	Wilson. A.D.	
597-3	594-6	613-5	Durlabhavaroddhana, contemporary with Yashdijird.
633-3	630-0	651-5	Pratāpīditya, founded Pratāpīpura. Durlabhāca, car. W.
683-3	680-6	701-5	Chandrapūra, or Chandrakand, a virtuous prince.
691-11	689-2	710-1	Tārāpura, a tyrant.
695-11	693-3	714-1	Lalitāditya, conquered Yasovarman of Kānauj, (Yasovigraha of inscriptions) and overran India.
732-7	729-9	750-8	Kuvaleyāpura.
733-7	730-9	751-8	Vajraditya.
740-7	737-9	758-8	Prithivīyāpura.
744-8	741-11	762-10	Saṅgramāpura.
751-8	748-11	769-10	Jajja, an usurper, deposed by
754-8	751-11	773-10	Jayāpura, married daughter of Jayanta of Guzer, encouraged learning, invaded Bhima Sāha of Gujārat, 841?
785-8	782-11	803-10	Lalitāpura.
797-8	794-11	816-10	Saṅgramāpura II, or Prithivīyāpura.
804-8	801-11	823-10	Vrihaspati, or Chippatājyā, son of a prostitute, whose five brothers governed in his name.
816-8	813-11	834-10	Ajithpura, set up by the same usurpers.
852-8	849-11	870-10	Anantpura, restored to the succession.
855-8	852-11	873-10	Utpalpura, last of the Karkuta race.

UTPALA DYNASTY, 54 YEARS 5 MONTHS.<sup>1</sup>

887-8	884-11	875-10	Aditya Varma, or Avanti Varma, a severe famine.
886-8	883-2	904-1	Bankara Varma, invaded Gujara and Rājā Bhoja (? see Māhā), Kashmir cycle brought into use, 69.
904-8	901-10	923-9	Gopāla Varma, killed in youth. Bankara, last of the Varma race.
906-8	903-10	924-9	Bṛhaddhā Rāva, recommended the election of
908-9	905-10	926-9	Pārśva.—The Patria and Ekaspaṇḍa powerful.
924-9	920-10	941-9	Nirjita Varma, also called Pangu, the cripple.
928-9	921-10	943-9	Chakra Varma, civil wars.
936-9	931-10	952-9	Sura Varma.

<sup>1</sup> Bunsen, 'Mémoires sur l'Inde,' p. 189; 'Nouveaux Mélanges Asiatiques,' vol. i. p. 195.

<sup>2</sup> [Prof. Wilson, in anticipation of the due course of publication, has obligingly favoured me with the subjoined note on an inscription which, under the double aspect of geographical proximity and identity of family names, seems to establish some sort of connexion between its line of kings and the Varma dynasty of Kashmir.]—<sup>3</sup> An inscription of some interest has lately been communicated to the Royal Asiatic Society by the President, having been sent to him by Mr. John Muir; unfortunately it is not known where it was originally found, beyond the fact that it was prepared in the north-west of Hindūstān; another defect is want of date, but the character in which it is written renders it probable that it is not later than the seventh or eighth century. The invocation shows it to belong to the orthodox system, as it is addressed to the Creator of the Triad, Brahmā, Viṣṇu, and Rudra, for the sake of the creation, preservation, and destruction of the universe. The document records, in a plain and unadorned style, the following succession of princes, of the Yādū family: 1. Sena Varma; 2. Ārya Varma, his son; 3. His son, Śrīdeva V.; 4. His son, Vṛadīpta V.; 5. His son, Isvara V.; 6. His son, Vṛiddha V.; 7. His son, Siddha V.; 8. His son, Jala V.; 9. His son, Vajra V.; 10. His son, Achala V.; 11. His son, Divakara V.; 12. His younger brother, Bhāskara V., who married Jayavati, daughter of Kapala-varddhana; 13. Their daughter was Isvari, married to Chandra-gupta, son of the king of Jalāndhara: on her husband's death she founded an establishment for religious mendicants, which foundation it is the purpose of the inscription to record.

Troyar. A.D.	Cunningham. A.D.	Wilson. A.D.	
937-9	932-10	953-9	Partha, a second time.
938-9	933-4	954-3	Chakra Varma, ditto.
939-3	933-10	954-9	Sankara Varman.
938-7	935-1	955-3	Chakra Varma, a third time.
939-11	936-4	957-7	Utmatti Varma.
941-11	938-10	959-9	Sura Varma II.
LAST OR MIXED DYNASTY, 64 YEARS 4 MONTHS.			
942-1	939-4	960-3	Yasakara Deva, elected sovereign.
	943-4	969-3	Sangrama Deva, dethroned and killed by
951-1	948-10	969-9	Parvagupta, slain at Suralwari Kohra.
952-10	950-2	971-3	Kahemagupta, destroyed many Viharas of Buddhists.
951-4	951-8	972-9	Abhimanyu, intrigues and assassin.
975-2	972-8	993-9	Nandigupta, put to death by his grandmother Didda.
976-2	973-9	994-10	Triloharana, shared the same fate.
978-2	975-9	996-10	Bhikmagupta, ditto.
982-3	980-9	1001-1	Didda Devi, assumed the throne herself, adopts
1006-9	1003-6	1024-7	Sangrama Deva II. (with whom Wilson's list closes.)
	1028-4	1032	Hariraja and Ananta Deva, <sup>1</sup> his sons (continued from the printed Tarangini.)
	1060-9	1034	Kalasa.
	1068-10	1062	Utkarsha, and Harsha deva.
	1100-7	1092	Udayana Vikrama, son of the latter.
		1072	Sankha Raja.
	1110-11	1092	Balha, grandson of Udayana.
	1111-3	1072	Susilha, usurper, &c.
	1127-3	1088	Mallina, his brother (end of Kalliana Pandit's list.)
	1127-9	1099	Jaya Singh, son of Susilha, (Jama Raja's list.)
	1149-9	1119	Parashona.
	1159-3	1119	Bandi deva.
	1166-3	1126	Depya deva.
	1175-7	1136	Jama deva, his brother, an imbecile.
	1193-8	1153	Jaga deva, son of Depya.
	1208-2	1167	Raja deva.
	1231-6	1190	Sangrama deva, III. a relation.
	1247-6	1206	Hansa deva.
	1268-7	1227	Lakhana deva, adopted.
	1281-10	1261	Sinha deva, new line; killed by his brother-in-law
	1296-4	1273	Sinha deva II. an usurper, who was himself deposed and killed by the Mlechhas under Raja Dullach (?).

The name or title *Varman*, or *Varma*, is especially appropriate to a man of the Kshatriya, the military and regal caste; it affords, therefore, no safe clue to the identification of this dynasty; but the mention of Jalandhara intimates their position among the mountains not far from Kashmir, where we find a race of princes bearing the same title; the first of these, *Avanti Varma*, began his reign after the middle of the ninth century, and he may have been a scion of the family recorded in this inscription, which, as above stated, is in a character that may be possibly of the seventh or eighth century, just prior to the date of the *Varma* dynasty of Kashmir. Thirteen generations, of what appears to have been a peaceable succession, will carry us back at least two centuries, so that we may safely place the first prince of this series in the sixth century of the Christian era.<sup>1</sup>

<sup>1</sup> The lengths of reigns only are given in the original: calculating therefore backwards from *Ali-ud-din*, it becomes necessary to curtail the reign of *Hariraja* (62 years) by about 50 years, to form a natural link with Wilson's date of *Sangrama Deva*.—J. P. [Major Cunningham (*Nam. Chron.*, vol. vi.) has pointed out the error committed by Prinsep in this place in confounding *Ali-ud-din* of Delhi with the Kashmir monarch of the same titular designation, whose date should therefore be corrected to A.D. 1361, or, as adjusted by Major Cunningham, to 1339.]

## THE BHUTA DYNASTY.

Todm.	Cunningham.	Wilson.	
A.D.	A.D.	A.D.	
Bahyana-dava	1318-10	1294	Sri Rinchana, obtained throne by conquest.
Kota Rani	1334-0	1394	Kota Rani, his wife. <sup>1</sup>

[The names of the Mussulman kings are continued from Major Cunningham's paper—]

Shah Mir	1334	6	10	Patch Shah	1483	7	28
Jamahir	1337	5	0	Muhammad (2nd time)	1492	7	28
Ala-ud-din	1339	4	0	Patch Shah (ditto)	1513	5	7
Shahab-ud-din	1353	0	23	Muhammad (3rd time)	1514	5	7
Kath-ud-din	1379	0	23	Patch Shah (ditto)	1517	5	7
Sikandar	1386	0	23	Muhammad (4th time)	1520	5	7
Ali Shah	1410	0	23	Nasuk Shah	1527	5	7
Zain ul Abidin	1417	0	23	Muhammad (5th time)	1530	5	7
Haidar Shah	1467	0	23	Nasuk Shah	1537	5	7
Husen	1469	0	23	Mirza Haidar	1541	5	7
Muhammad	1481	0	28	Humayan			

Kashmir finally annexed to the Moghul Empire under Akbar, in 1586, A.D.

TABLE XXIII.—*Chohans or Chahumans Dynasty, at Ajmir, Dilli, and afterwards Kotah and Bundi.*

<sup>1</sup> The Chohans, one of the four Agulula tribes, Chohans, Parikars, Solanki and Prumars, said to have been produced by a conversation of the gods on Mount Abu supposed of Parthian descent.—Tod, vol. ii. p. 451.

A.C. 700 Andia, or Andul Chohan, established at Garra Mandala.

Burkha.

Mallan, source of Mallani tribe?

Galan 842.

A.D. 145 Ajipala, Chakravarti, founder of Ajmir, 302 of Virat era?

Shasanta Dasa,

Maha Dasa,

Ajaya Singh, † Ajipala, } Wilford.

Virat Singh,

Vindasur,

Vairi Vihanta,

584 Dola Rai, lost Ajmir to Muhammadan.

605 Manikya Rai, founded Sambhar: house title of Sambhar Rao, slain by Muslim invaders under Abul Aka; eleven names only in Jajaji's catalogue, Tod, vol. ii. p. 444.

Mahatma.

Chandru Gupta, (of Allahabad pillar inscription? See Kanungo.)

Pratap Singh.

Mohan Singh.

Satarai.

Nagahmta.

Lohadhar.

Vim Singh, II.

Vibadli Singh.

Chandra Ray.

<sup>1</sup> The names of the Muhammadan chiefs, who held possession of the valley, sometimes independently, under the Putan and Moghul Emperors, are so disfigured in Nagari characters as to be hardly recognizable. Jona Bhaja's list continues to Zain-ul-ab-ud-din, 815 Hijra, whence Sri Vasa Pandit continues it to Patch Shah, A.D. 1477. The 'Bajavali Patika' brings on the line to Akbar's conquest in 1560, (see Muhammadan dynasties).—J. P.

<sup>2</sup> Bombay Government Selections, vol. iii. p. 193.

- s.c. 770 Haribara Ray (Hurnāj, Tod), defeated Subaktigin.  
 Basanta Rai.  
 Ballanga Rai (Belundeo? Tod), or Dherura Gaj, slain defending Ajmir  
 against Sultan Mahmūd.  
 Prannatha Rai.  
 Anag Raja, (Amalla Deva, Dilli inscription).  
 1016 W. Vimala Deva,<sup>1</sup> from inscriptions, 1091 to 1095, Tod, interpolated date  
 in the books of Chand, S. 921.  
 Seranga Deva, a minor.  
 Ana Deva, constructed the Anah Sagar, at Ajmir.  
 Hiepāl (of Ferishtah), father of  
 977 Jayah Singh (or Jypāl of Ferishtah, burned himself, 1000, see Mālwa),  
 extended his dominion to Lahore, etc.  
 1000 Ananda Deva (or Ajay dew), Anandpāl, P.  
 Somerswara, married daughter of Anangpāl of Dilli.  
 1176 Prithivī, of Lahore, obtained Dilli, slain by Shahābuddin, 1192.  
 1192 Kalnāl, slain in the sack of Dilli, T.  
 Vijaya Ray, adopted successor of Prithivī (see Dilli pillar).  
 Laknāl, thence twenty-six generations to Noman Singh, present chief of  
 Nimkna, nearest lineal descendant of Ajpāl and Prithivī.<sup>2</sup>

TABLE XXIV.—*Haravati or Harauti branch of the Chohan Dynasty.*

The Haras are descended from Anurāja, a son of Vimaladeva, or more probably  
 of Mānikya Rai, Tod, vol. II. p. 454 (see preceding table).

- A.D. Anurāja, took possession of Aul, or Hansi, in Hariana.  
 1024 Ishpāl, obtained Aulgrāh, miraculously.  
 Chand Karni.  
 Lok Pāl.  
 1102 Hamira (known in Prithivī's wars), killed in 1192.  
 Kāl Karni.  
 Mahā Magh.  
 Han Bāha.  
 1208 Han Chand, slain with all but one son by A'la-ud-din.  
 1300 Raināl, protected at Chitor, obtained Bhynaror.  
 Kūm, declared lord of the Pathār, (central India).  
 1341 Rao Bānga, took possession of the Han court of Mynāl.  
 Rao Deva, summoned to Lodi's court, abdicated to his son.  
 Hara Rāja, founded Bundi; country called Haravati after him.  
 Samard (Samars Siah), conquered the Billa.  
 Napsāl, feud with Salmāhī chief of Thoda.  
 Hamā-jī, defied supremacy of Rāna of Mowā.  
 Hirsingh.  
 1410 Bira.  
 1465 Rao Bundi, a famine, 1457, expelled by his brothers  
 Samarkandī and Amarkandī, who ruled twelve years.  
 Narsin Dās, recovers Bundi.  
 1538 Suraj Mal, assassinated by Chitor Rāna.  
 1534 Soortan, a tyrant, banished.  
 Rao Arjun, his cousin, killed in defence of Chitor.  
 1575 Rao Rāja Surjan, Chamar, and Benares given to him.  
 Rao Ilarja, separation of Bundi and Kota.

GUPTI BRANCH.

- 1578 Rao Ratan, built Ratanpur, his son Mādho Singh receives Kota from  
 Juhāngir, henceforward separation.

<sup>1</sup> The lath of Firoz, bearing Vimala Deva's name, is dated S. 1220, in the reign  
 of Vignarha Rai Deva. See *ewā*, vol. i. p. 225; also 'An. Rec.', vol. vii.

<sup>2</sup> See also lists in 'Ayn-i-Akbari,' vol. ii. p. 94-97, etc.

- A.D. 1578 Gopināth.  
 1652 Chitra Sāl, took Kalberga, under Aurangzib, killed with twelve princes  
 in battle of Ujjain.  
 1668 Bhaṇ Sīn, received government of Aurangzib under Aurangzib.  
 1681 Asurād Sīn.  
 1718 Budh Sīn, supported Bahādur Shāh, dispossessed by Jyaur Rājā.  
 1743 Omada, regaine Bundi, 1749, with Holkar's aid, retires 1771, dies 1804.  
 1770 Ajit Sīn, Jugrāj, murders Rāna of Mewar.  
 Rao Rāj, Bishen Sīn, minor, protects Colonel Munson's flight.  
 1821 Rām Sīn.

## KOTAH BRANCH.

- 1679 Madhu Sīn, son of Rao Ratan (see above).  
 1680 Mokund Sīn.  
 1657 Jagat Sīn.  
 1669 Keswar Sīn.  
 1685 Rām Sīn.  
 1707 Bhīm Sīn, entitled Mahārān.  
 1719 Arjun.  
 1723 Durjan Sāl, without issue, Zālīm Sīn, born 1740.  
 Ajit, grandson of Bishen Sīn.  
 Chitr Sāl, succeeded by his brother.  
 1765 Gomān Sīn, — Zālīm Sīn, Ferozdar.  
 1770 Omada Sīn, " Regent.  
 1819 Keswar Sīn, Madhu Sīn, ditto.

TABLE XXV.—*Rājās of Malwa, Capitals Ujjayini, and Mandūr.*

'This line is taken from Abd'ī Fazl,' and is supposed to have been furnished from Jain authorities: it agrees nearly with appendix to 'Agni Purāṇa.'—Wilford.<sup>1</sup>

In early ages Mahāmahā founded a fire temple, destroyed by the Buddhists, but restored by

B.C. 840 Dhanjī (Dhananjaya, a name of Arjun) about 785 before Vikramāditya  
 (see Anjuna, Burmese list).

760 Jitahandra.

<sup>1</sup> [ 'Avin-i-Akbari,' vol. II. p. 49, et seq.

<sup>2</sup> [As Wilford's list, purporting to be taken from the 'Agni Purāṇa,' were largely quoted in the original edition of this work (A.D. 1835), it is necessary that I should annex the caution in the reception of that author's data since enjoined by Prof. Wilson:—] 'Col. Wilford (Essay on Vikramāditya and Śālivāhana, 'Asiatic Researches,' vol. ix. p. 131) has made great use of a list of kings derived from an appendix to the 'Agni Purāṇa, which professes to be the 63rd or last section. As he observes, it is seldom found annexed to the 'Purāṇa.' I have never met with it, and doubt it ever having formed any part of the original compilation. It would appear from Col. Wilford's remarks, that this list notices Muhammad as the instigator of an era; but his account of this is not very distinct. He mentions explicitly, however, that the list speaks of Śālivāhana and Vikramāditya; and this is quite sufficient to establish its character. The compilers of the 'Purāṇa' were not such bunglers as to bring within their chronology so well-known a personage as Vikramāditya. There are in all parts of India various compilations ascribed to the Purāṇas, which never formed any portion of their contents, and which, although offering sometimes useful local information, and valuable as preserving popular traditions, are not in justice to be confounded with the Purāṇas, so as to cause them to be charged with even more serious errors and anachronisms than those of which they are guilty.'—'Vāṇas Purāṇa,' pp. 38-9. London, 1849.—Again, p. 73, preface, 'The documents to which Wilford trusted proved to be in great part fabrications, and whose genuine, were mixed up with so much loose and unauthenticated matter, and so overwhelmed with extravagance of speculation, that his citations need to be carefully and skilfully sifted, before they can be serviceably employed.'

B.C.	870	Śalivāhana. <sup>1</sup>
	889	Nirvāhana.
	580	Putra Rāja, or Vānsarāja, without issue.
	400	Aditya Punwar, elected by nobles (not. Sapor, A.D. 191, W.)
	390	Birma or Brahma Rāja, reigned in Vidharbhanagar.
	360	Atibrahma, at Ujjain, defeated in the north.
	271	Sadhrushana Sadasya-Sena <sup>2</sup> .
	191	Heymert, Harcha Megha, killed in battle (misplaced, W.)
	91	Gundrup, Gardubharaja, Bakrum-gar? of Wilford.
	56	Vikramāditya (3rd of Wilford. A.D. 441 Yashodird?) Tukr tr.
A.D.	44	Chandrasen, possessed himself of all Hindustan.
	135	Kanakzen, Surya Sena, W. 676.
	215	Chaturkot (Sactisinh succeeded, W.)
	216	Kanaksen (see Saurashtra, which he conquered? 144, Tod).
	302	Chandrapal.
	402	Mahendrapal.
	409	Karmachandra.
	410	Vijayamada, adopted a successor (his son being an infant) Sindula, W.
	479	Munja, killed in the Dekhan (reigned A.D. 893 according to Tod).
	483	Rucra <sup>3</sup> (S. 540), by Tod. 367 A.D. <sup>4</sup> Kalidā flourished.
	583	Jayachandra, put made in favour of
	593	Jitpal, of the Tenore (Tukr) caste (Chaitra Chandra, 'Davihya P.')
	598	Rāna Rāja.
	603	Rāna Rāja.
	604	Rāna Jala.
	620	Rāna Chandra.
	654	Rāna Bahādur.
	659	Rāna Bahādur.
	684	Rāj Puhapāl.
	669	Rāj Kayrapāl.
	674	Rāj Anangapāl (rebuilt and peopled Dilli, 791, Tod).
	734	Kunwarpāl.
	735	Rāja Jagdeva, of the Chahān tribe.
	745	Jagunnath.
	755	Hara deva.
	770	Vasu deva.
	780	Berasdeva.

<sup>1</sup> [Orientalists do not rely much upon Wilford's speculations in these days; but as evidence imperfect in itself has often some foundation in truth, it may not be inappropriate to transcribe the following, which seems oddly to assimilate with some of the indications noted at p. 274-5, vol. i., in regard to the Gupta succession:—'As there are several kings and legislators called Vikrama; in the same manner we find also several Śalivāhana. This grandson of Dharmarāja is made contemporary with another Vikramāditya, who is supposed to have begun his reign A.D. 191; but, according to others, either in the year 184 or 200. In Hargunath's lists, current in the western parts of India, which have appeared in print, instead of Śalivāhana, we find Samudrapala.'—'As. Res.' ix. 135. See also pp. 146-7, *ibid*; and the various tale in connection with Sakāditya or Bhartihari, brother of Vikramāditya, and his retirement to Bhāṭari, on the Gumbi, near which place, Wilford remarks, 'is a stone pillar, with an inscription, containing only a few couplets from the Mahābhārata' (see *op. cit.* p. 240, vol. i., Bhāṭari Lat. Inscription).]

<sup>2</sup> Vānsaraja of Wilford, Rucra, Ferishtah. A.D. 390, father-in-law of Bahram (see Kanak).

<sup>3</sup> [See Pichawa or Thansewar Inscription, 'Journ. As. Soc. Beng.' vol. xxii. p. 673, dated 279 Samvat, but of doubtful attribution. Names recorded: 1, Mahendrapala; 2, Jaitala; 3, Vijeta; 4, Yajūka; 5, Segga; 6, Purva; 7, Derarāja; 8, Ramchandra; 9, Bhoja.]

<sup>4</sup> The other two Rāna Bhoja, Tod fixes in 666 (from Jain MSS.) and 1035, the father of Udavati.





- A.D. 1220 Biral.  
 1236 Purnmall.  
 1268 Harnand.  
 1330 Sakat Singh, killed by Bahādur Shāh, King of Dekhan.  
 (On the division of the Dillī monarchy on Ghāsiuddin Tughlak Shāh II's death.)  
 1390 Dilāwar Khān Ghori, viceroy of Mālwa, assumed sovereignty.  
 (See *Musalmān Dynasties*.—'Ain-i-Akhari,' vol. II. p. 87.)

[The inscription on a temple at Oudayaspūr, taken by Captain Burt in 1838, claims notice in this place, on account of its supplying us with evidence of the existence, and continued currency for more than four centuries, of an era designated by the name of Udayāditya. The nominal roll of the princes associated with this monumental record does not satisfactorily fall in with the traditionary list of the Mahārājas of Mālwa; but this need not affect the authenticity of the one or the other, as the provincial dignities, of which the inscription is an exponent, were usually treated *en seigneur*, whatever title to real power or supremacy the local ruler might chance to possess.]

- 1 Suravira (of the Pāvans line).
- 2 Gendala.
- 3 Aravahamthana (went to Malava and recovered his former kingdom of Madhya desa, and 'caused this sacred and divine temple to be erected' . . . in the year of the Vikramāditya Samvat 1116, corresponding with the Saka-year 981, in the Kaliyuga 4160, and in the assay of Udayāditya 446.)
- 4 Śālikrahma.—'Jour. As. Soc., Beng.', vol. ix. p. 546.]

TABLE XXVI.—*Saurāshtra (Surd and Gujarat). Capital, Balabhipura. The Balabhi, Balhara, or Bala-raia Dynasty.*

The Jain chronicles of Jai-sinha, consulted by Colonel Tod, trace the ancestry of Kencaka, the founder of the Mēwar family, up to Sumitra, the fifty-sixth descendant from Rāma (*vide* the Surya-varma list). Solar worship prevailed, afterwards the Jain.—[Tod, vol. i. pp. 231, etc.]

A.D.	Notes	Names according to grants dug up in Gujarat.—William.
0	Maharaja, follows Sumitra, Tod.	
	Antarika.	
	Achilama,	Senapati, { Bhatarika. A.D. 144-190. Dharmama.
144	Kanakama, emigrates to Saurāshtra (vol. i. p. 216).	Maharaja, { Dhanasinha. Dharmasena I.
	Mahā Madan Sen,	Dharapatta.

you may place on record, if you can afford to spare a space for them in your journal.—*Solera*, 27th August, 1838. See also 'Jour. As. Soc. Beng.' vol. vii., p. 736.—[Another Nagpur inscription, translated and collated with kindred documents by Ball Gangadhar Shastri supplies the following list.—1. Vairi Sinha; 2. Bhīmaka (his son); 3. Rāja Rāja, or Bhōja Rāja (his son); 4. Bhadra Rāja; 5. Bhōja deva; 6. Udayāditya; 7. Lakshmi dhara; 8. Nara Varma deva (A.D. 1166); 9. Yaya Varma deva (A.D. 1187); 10. Jaya Varma deva; 11. Lakshmi Varma deva; 12. Vindhya Varma (son of Ajaya Varma); 13. Harichandra (A.D. 1179); 14. Anushayana; 15. Subhava Varma; 16. Arjuna (his son, A.D. 1211).] 'Jour. Bomb. B. Roy. As. Soc.', vol. i. p. 263.

<sup>1</sup> [See *note*, vol. i. p. 236. See also 'Jour. Bomb. B. Roy. As. Soc.' vol. iii. p. 216.—The Rev. P. Anderson has examined the nominal series obtained from previously published grants of this family, and tested them by the aid of new inscriptions. His

A.D.		Names according to grants dug up in Gujarat.—Wathen.
316	Sudanta, Viya, or Ajayana, founded the } Balabhi era, Tod. <sup>1</sup> } Padmaditya, Sivaditya (466 Gardha-bhela? of } Jain MSS.) } Haraditya, Suryaditya, Somaditya.	Grihasena. Sri-dhara Sena, 319. Sikaditya I. Charagriha, I. Sridharmasena, II. Dhruvasena, II. Sridharmasena, III. Sikaditya, II. (three names obliterated). Charagriha, II.
523	Sikaditya, killed, and Balabhi de- } stroyed by the Parthians, 524. }	523 Sikaditya, III. 559 Sikaditya Murali, IV.

ORIGIN OF GHULOTS, GRAMALOTS, OR SENSODIA TRIBE OF SURYA-VANSH.<sup>2</sup>

	Kaiswa, Goba, or Grabaditya, posthumous son of Sikaditya, born in Bhander forest. Nagaditya, of Bhander. Bhagaditya. Devaditya. Kasaditya, founded Apor in Mewar. Khalbhaja. Grabaditya (others make Nagaditya), father of	Names inscribed on Apor marble, Tod.
713	Buph, or Bagpa, seized Chitor, from Mori tribe, A.D. 727, and founded the Gohila or Gohilote, dynasty of Mewar.	
	(Continued in Table XXVIII.)	

[I extract the following summary of dates, forming the *résumé* of Dr. Stevenson's remarks upon his translations of the Western Cave Inscriptions, published in the 'Journ. Bom. Br. Roy. As. Soc.,' vol. v., without in any way pledging myself for its accuracy; indeed, it will have been seen that Dr. Stevenson and myself differ notably in our ideas of the correct epochs of two of the leading dynasties of India; but for this very reason I am the more anxious to allow him to speak for himself in as much of detail as my space will permit me to concede to reasoning that I so far deny myself the opportunity of contesting.—E.T.]

"I shall now conclude this paper with a short summary of the chief events mentioned in the Sakyadri inscriptions, in chronological order. . . The dates which have

observations, to the following effect, are merely important in the correction of the orthography of names and titles.—In the Bengal Society's list, the 7th, 10th, and 12th of these kings are called Sri Dhara sena, but in both the plates now before me the names are precisely the same as the second, *i.e.*, Dhara sena, with the addition of Sri, which is common to all the kings. Moreover Sikaditya is said in the 'Bengal Journal' to be surnamed Kramaditya. . . The surname is clearly written on plate ii. Dharmaditya. Three of the other kings are not Dhara, but Dhruva sena.—'Bom. Jour.' vol. iii. p. 216.]

<sup>1</sup> This and the Sri-dharmasena of the adjoining list, fixed upon as the founders of the Balabhi era or *samvat*, may probably be the Suraka of the Puranas, mentioned as a Vikramaditya to mount the throne An. Kal. Yug. 3290, or A.D. 191 or 291 ('As. Res.' vol. ix. pp. 135, 203), Wilford. Many legends related by him of the Aditya, belonging to this dynasty.

<sup>2</sup> The Persian historians make Nozhirad, son of Nozhirvan, or Maha Band, daughter of Yazdijird, the origin of the Sensodia race of Mewar, 63

not been ascertained from inscriptions, but merely made out by calculation, are marked with an interrogation.

<sup>n.c.</sup>  
200.(?)—A cave was excavated, and an abode-house established in it, on the top of the Nānā Ghāt, by an Emperor of India, probably Kaskā, the first Buddhist Emperor.

76.(?)—The Great Cave Temple at Kārlan was formed by the Emperor Deyabhatti, under the superintendence of Xenocrates, (धनुकाकटा or धीनुकाकटा) a Greek.

65.(?)—A small cave was excavated at Kāsheri by the same Xenocrates, in which a supposed tooth of Buddha was deposited, till it was removed to an adjoining top, as mentioned below.

23.(?)—The expedition of the constructors of the cave mentioned below into Malabar, to quell an insurrection there, took place.

22.(?)—The central or Satrap cave at Nāsk was excavated by Ushavadata, son-in-law of the Satrap Nahapāna, of the Parthian monarch Kshaharāta (Purubatus?).

20.(?)—Lands were given to the monks at Junir, who dwell in the third series of southern caves, by several individuals, and especially by Srinaka, called there Srinaka, the first Andhrakhetiya sovereign, while he was yet only prime minister.

15.(?)—The Great Temple Cave at Kāsheri was probably excavated by the same monarch, after he ascended the throne. The name given him above is that of the Matsya Purāṇa; here he receives the name of Balis, that given in the Bhāgavat.

<sup>A.D.</sup>  
189.—A topé or mound was constructed at Kāsheri to contain the tooth of Buddha, mentioned above, and also in honour of a celebrated Buddhist devotee, by Pushyavarman, who was connected with the Andhra royal family.

N.B.—This is the topé opened by Dr. Bird in 1839, and which contained a plate with the date on it.

226.—The village of Karanja, on the Ghāts, was made over to the monks at Kārlan by the two great military commanders, who, in the struggles between the regal Satraps and Magadh Emperors, had most likely wrested the adjacent territory from the former and afterwards resigned it to the latter. About the same time, also, the image of Buddha, on the left of the entrance, where these inscriptions are found, was probably executed.

237.—The large cave most to the left of those that contain inscriptions at Nāsk was excavated at the command of the queen of Gunturi-patra, described as lord paramount of India and Ceylon, and who had established in his capital a college for Brahminical and another for Buddhist science, an institution for teaching archery, and a hospital.

N.B.—Reasons have been adduced to show that the era mentioned in this inscription is the Balabhi, and that it was established in commemoration of the overthrow of the Greco-Parthian empire in Western India, by the united forces of the Magadh Emperor and the Balabhi Commander-in-Chief, who rebelled against his sovereign, the reigning royal Satrap, and rendered himself independent. These Satraps had, in all probability, reigned for a long time in their own right, and had professed the title regal to their former appellation to point this out. The latest date on any of their coins is Samvat 390, or A.D. 333; for I think, from the form of the letters, that the era must be the common Samvat. We have, then, only to suppose that on the India their government subsisted fourteen years after it was overthrown in Gujarat, as the Balabhi era commences with A.D. 319. In accordance with this supposition, none of the 400 regal Satrap coins that were found at Junir in 1846 belong to the two last Satraps. The remaining, too, of Rudra Dāma, the last of them but one, on the Gīrnār inscription,

A.D.

over the Śātkarni ruler of the Dakṣiṇa, our Andhra monarch, could refer only to some partial success preceding the final catastrophe, as we usually find people boast most when hardest pressed. From our inscriptions it is evident that the hills in which the caves are excavated were sometimes in possession of the one and sometimes of the other party.

342.—The monastery cave at Kārien was excavated by a mendicant devotee.

410.(?)—Buddaghosha, the author of the Pāli work called in Ceylon the 'Atthakatha,' and the Buddhist apostle of the Barman peninsula, set up a middle-sized image of Buddha on the right porch of the Great Temple Cave at Kānheri.

428.(?)—During the reign of the Andhra monarch Yadnya Śri Śat Karni, who is mentioned in the annals of China as having sent ambassadors there, a nephew and other relations of his set up the two colossal images on each side of the porch of the same great cave, and at the same time a village was given to the monks.

430.(?)—Other relations of the same Emperor established an alms-house in connection with a cave at Kānheri.

431.(?)—Others of the royal family established a refectory in connection with another cave there.

433.(?)—A monastery cave was excavated at Nīlā by command of the wife of the commander-in-chief of the same Emperor.

460.(?)—A temple cave at Kāden (Korā), in the Comara, was excavated by the Secretary of the Chief of Salsette, who seems to have exercised authority over a considerable adjoining district of country.

N.B.—The above-mentioned works are all that appear to me to derive from the inscriptions probable indications of the period about which they were executed, whether by means of the dates or the names they contain. The time when the others were engraved can only be guessed at from the style of the letters; but none seems to me to have been inscribed on the Salyāhīri rocks at a later period than that last mentioned, and certainly none earlier than the first date here given, bringing them all within the two centuries preceding and the five succeeding the Christian era, during which time Buddhism flourished in Western India, while the modern Hindū system was silently moulding itself into its present form and preparing to take the place, at a somewhat later period, of the religion of Buddha, and to exhibit that compound of Vedic pantheism, Buddhistical tenderness for animal life, and indulgent supererogation that is now current in India. During, however, the whole period of Buddhist ascendancy, Brahmanas existed, studied their literature, had their holy places, and performed those of their rites that could be performed in private. The common people also worshipped Krishna, Bhavāni, and Śiva, as local gods, in particular districts. The travels of the Chinese Fa Hien show that, at the beginning of the fifth century, Buddhism prevailed throughout India; and those of Whang Tsung show that this was still the case in the beginning of the seventh century. An inscription, of date A.D. 657, originally affixed to a Buddhist temple near Nagpur, shows that it still prevailed in the East at that period ('Jour. Bom. Roy. As. Soc.' vol. i, p. 150.) It is to be noticed here, also, that there is a discrepancy of 42 years between the date A.D. 342 and A.D. 428."

TABLE XXVII.—*Gujarāt. Capital Patan. The Anhulwāra Dynasty, a restoration of the dynasty of the Balhāras.*

'Aṅga Akhārī' list collated with that of the 'Aṅga Parāna,' of Wilford.

A.D.	
696	Salla-deva, living in retirement at Ujjain, found and educated.
802	745 Banarāja, son of Samanta Simh (Chobān), who founded Anhulpur (Nerwālā or Patan), called after Anala Chobān, A. A.

		A.D.	Chavva Dynasty of Aundhpoor.
806 Jegerāja .....	Bhanda-deva, Wn.	746	1. Wun Rāj, son of Jye Shaker.
841 Bhima Rājā.....		806	2. Yog Rāj.
866 Bheer .....		841	3. Kshem Rāj.
895 Behirsinh .....		866	4. Bhonyul.
920 Koshadat .....	From the 'Ain Akbari. Raja Aditya, W. Daughter, married son of Dhill Rājā: Bhanda, W.	895	5. Vair Sing.
935 Samanta .....		920	6. Rutsaditya.
		935	7. Samant Singh.
		942	Mool Rāj Sulunkhet.— 'Rās Mālā.'—London, 1856.

## RĀJAS OF THE SOLANKHI TRIBE.

- 910 W. Mula Rājā, usurped the throne.  
1025 Chamund, invaded by Sultan Mahmūd (Samanta, W.)  
1038 Vallabha (Beyser, or Bisela, 'Ay. Ak'), ancient line restored.  
1039 Durlobha (Dabhalima, F.), usurped the throne.  
1050 Bhima rājā.  
Khaladeva (Karan, 'A. A.'), Carna-rājendra, or Vishala-deva, Wn., who became Paramount Sovereign of Dhill (see p. 247).  
1094 Siddha, or Jayasinh, an usurper (Tod, vol. i. p. 98).  
Kumārāpala, poisoned.  
Ajayapala, son of Jayasinha.

## SOLANKHI DYNASTY.

List of the successors of Mool Rāj, from a copper-plate inscription, dated Samvat 1266 (A.D. 1210), found at Ahanadibid.

- 1 Mool Rāj dev.
- 2 Chāmoond Rāj dev.
- 3 Durlobh Rāj dev.
- 4 Bhoom dev.
- 5 Kurva dev.
- 6 Jye Singh dev.
- 7 Koonar Pāl dev.
- 8 Ujya Pāl dev.
- 9 Mool Rāj dev.
- 10 Bhoom dev.

'Rās Mālā.'

## THE BHADOLA TRIBE.

- Mula (Lakhmi, 'A. A.'), Lakhān-rāja, W. without issue.  
Bichmala, } Balma-mula, Wn.  
Beldera, } of Bhāgela tribe.  
1209 W. Bhima Deva, or Bhala Bhima Deva, same as the last, Wn.  
1260 Arjun deva,  
1260 Saranga deva, } 'Ay. Ak.'  
1281 Karan, } Carna the Gchila, fled to the Dekhan, when in the year  
1309 Gujarat was annexed to Dhill by 'Ala-ud-din Muhammad Shah.

TABLE XXVIII.—*Ednas of Mevdr. Capitals Chitor, Udayapur.*  
(Continued from Table XXVI.)

After the destruction of the Bahlāra monarchy of Sourāshtra, and two centuries' sojourn of the family in the Bhander desert, Bapā or Bappa conquered Chitor, and founded a new dynasty in A.D. 727. The hereditary title was changed from Gchilote to Aditya.

Wāner's list.	Tod, from Aittur inscription (dated Samvat 1064, vol. i. p. 88).
720 Gchila .....	1. Sri Gokadit, founder of Gchila (Gchilote) tribe.
Bhoja .....	2. Bhoja (Bhagaditya?)
	3. Mahendra.
	4. Naga (Nagaditya).
	5. Syala.
	6. Aprajit (compare with Table XXVI.)
	7. Mahendra.

<sup>1</sup> See also 'Ain-i-Akbari,' vol. ii. p. 74, et seq.; Elliot, 'Jour. Roy. As. Soc.', vol. iv. p. 1.

- Wilson's Hist. Tod, from Aitpur inscription (dated Samvat 1264, vol. i, p. 200).
- Kalabhaja ... 8. Kalabhaja.
- Bhartribhata... 9. Khoman, invasion of Chitor from Kābal 812 A.D.
- Samahāyika... Mongul, expelled by chiefs.
- Khūman ..... 10. Bhīrtripad, founded thirteen principalities for his sons in Mālwa and Gujarāt.
11. Singhit, whose Rāt, Lakshmi, bore
- Allāta ..... 12. Sri Allat, whose daughter Haria devī was grandmother of
- Naravahana... 13. Nirvāhna.
14. Salvaṇa.
- 967 Saktivarma ... 15. Saktikumar, resided at Aitpur, 967, or 1068? Tod, vol. i. pp. 243, 603.
- Suchivarma... Umas Pann.
- 977 Naravarma ... Narvarma, contemporary with Saktikūtin.
- 1027 Kirtivarma... Yauvarma, do. with Mahmūd. Aitpur destroyed.
- Vairi Singh, (Vira Singh deva of Kanauj? See Bengal.)
- Vijaya Singh.
- Ari Singh.
- Vikrama Singh.
- Sāmanta Singh, 1306, W.
- Kumara Singh.
- Mathana Singh.
- Padma Singh.
- Jaitra Singh.
- Tej Singh.
- 1165? Samara Singh, (Samari, T.) born 1149; marries Prithi Rāi's daughter.
- 1192 Karna, or Karan, his son—
- 1200 Rahup, —attacked by Shams ud din, 1200.
- Nine princes, occupying fifty years, engaged in crusades, to recover Gayā from the infidels (Buddhists), T.
- Rhond, recovers Chitor.
- 1374 Lakshman Singh (Laksmi, T.), married Ceylon princess.
- 1389 " " (Kamdeo of Fortishta.) Chitor sacked by 'Alā-ud-din, (1305, F.)
- Ajaya Singh (Ajayal, T.), resided at Kailwarra.
- 1390 Hantra, son of Ūrā, recovered Chitor.
- 1394 Khait Singh (Khaitai, T.), captured Ajmer.
- 1372 Lakha Rana (Lakha Rana, T.), rebuilds temple. Expedition to Gayā.
- 1397 Mekniji, supplants rightful heir Chonda.
- 1418 Khumbha (Kumbha, T. Gowaha, 'A. A. '), defeats Mahmūd of Mālwa; pillar raised in commemoration at Chitor. Tod, 1439, vol. i. p. 286; vol. ii. p. 761.
- 1466 Oda, murders his father, and is killed by lightning.
- 1473 Razmal, repels invasion of Delhi monarch Lodi.
- 1508 Banga, Singram, or Sinks, the *Kales* or pinnacles of Mewār glory, successfully resists Bābar at Bikanā, 1526.
- 1529 Ratan, fell in duel with Bundi Rāja.
- 1532 Bikramajit, his brother. Second sack of Chitor by Bahādur of Gujarāt; recovered by Hamāyūn.
- Banbir, the bastard, raised to throne by Rājputa.
- 1540 Udaya Singh (Oody Sing), third sack of Chitor, 1530, by Akbar.
- 1583 Partāp (Rāna), reverses at Udiṭpur and Kumalot.
- 1596 Amara (Umar), succeeds, recovers the ruined capital; defeats Abdullāh Jan. 1616; makes peace with Jahāngir.
- 1620 Karna (Kurn), last independent Rāja; embellished Udiṭpur.
- 1627 Jagat Singh, tributary to Shah Jahan; peaceful reign.
- 1653 Rāj Singh, embellished Lake Rājammundra.
- 1680 Jay Singh, forms the Lake Jay-mund.
- 1699 Amara, II, triple alliance with Mārwar and Amber, S. 1759.
- 1715 Sangrām Singh; the *ajit* tax abolished.
- 1733 Jagat Singh II. pays chauth to Marhattas.
- 1751 Partāp, II.
- 1754 Rāj Singh II., country desolated by Marhattas.

- 1761 Arsi, his uncle, Zailin Singh's son.  
 1771 Hamira, a minor.  
 1777 Bhim Singh, his brother. Holkar and Sindia overrun Mewar. Marriage feud of Jyppar and Jodhpur. Kishna Kumar poisoned, and the race of Bappa Rawal extinguished, all but  
 1828 Jewan (Javan) Singh, the only surviving son.

TABLE XXIX.—*Rakht Dynasty of Kanauj, afterwards continued in Mewar, or Jodhpur.*

From Tod's genealogical rolls of the Rakhts, preserved by the Jains, vol. ii. pp. 5-7.

- A.D. (After the usual Theory.)  
 300? Yavanasava, prince of Partapur: supposed of Indo-Scythic origin.  
 300 Basdeva (Vastdeva), revives Kanauj dynasty; his daughter marries } Ferishtah.  
     Jubhraon Sassan, of Persia.  
 400 Ramdeo, fixed in Mewar—tributary to Feroz Sassan.  
 460 Nayana Pala, conquers Ajikola of Kanauj—honor called Kham Devaja.  
     Jadhvat or Jharata, king of Kanauj.  
     Panja, his son.  
 570? Dharma Bhambo, his descendants called Dharmara Candhoj (for twenty-one generations bore the name of Rao, afterwards Raja.)  
     Aji Chandra.

	From inscriptions &c.	Printed Gupta Plates. J. A. S. B. vol. 2. p. 20, dated A. 712? - A.D. 100.	From coins, old series &c. Aparajitadityajap- rakrama. Aparirukha. Kragiptapara- deva? Sri Vikrama. Chandragupta. Samudragupta. Kumarakupta. Vikrama Niren- dragupta. Sasigupta? Aśvamedhapur- krama. New series.
Udaya-chandra. Nirpati.			
Konksidra (see Māhā 460?) Sahasra-sāla. Moghāsāna. Virohādra.	Gupta. Ghatotkacha. Chandragupta. Samudragupta. ..... & c.		
Dāman. Vimalasena.			
Dāman. Makunda. Bhadra.	700? Yasovigraha or Gripala. Mahichandra.	1 Yasovigraha. 2 Mahi Chandra.	
1016. Kura or Chand- pā, F. Rajen. Triphala. Sci Panja. (Vira Sīsha), see Bengal.	1072 Chandra deva, conq. Kanauj. 1090 Madana Pala. 1120 Govinda Chan- dra. 1144 Vijaya Chandra. 1163 Jaya Chandra, died, 1193.	3 Chandra deva? 4 Madana pala. 5 Govinda Chan- dra. 6 Vijaya Chandra. 7 Jaya Chandra.	Mahipala deva. Kumārphala deva. Govinda Chandra. Jadjeva deva. Ajaya deva.
712 (Yas varman), see tab. xxii.			
900 (Śāhasanka), see 'Via. Prak.' Vijayachandra.			
1169 Jaya Chandra, (Dul. Pangla).			

<sup>1</sup> Wilford names this prince Sadāpala, or Sadādevapala, 'As. Res.', vol. ix. p. 211.

<sup>2</sup> See Haasya, vol. i. pp.

<sup>3</sup> 'Who was also very learned, king of kings, etc., and who gained the kingdom of Kanaya Kubja by the power of his arms.'

<sup>4</sup> [See vol. i. pp. 288, etc.; 'Aṣṭa-i-Akbari,' vol. i. p. 80.]



TABLE XXX.—*Mārcār or Jodhpur. Continuation of ditto.*

- 1210 Sīvajī, grandson of Jayachandra, settled in the desert, Kher.  
 Ashthama (Aothama T.)  
 Doolar, T. Dula Rai, W. made an attempt on Kanauj and Mandor.  
 Raipāl.  
 Kashul.  
 Jalhun.  
 Chado.  
 Thredo.  
 Sīlūk or Sēko (scion of the Sikkawats or Ikhneds).  
 Brāndora.  
 1381 Chanda, assaulted Mandor, and made it his capital.  
 1408 Rinnal, of Gohila mother, made pilgrimage to Gey.  
 1427 Rao Joda and twenty-three brothers had separate fiefs.  
 1458 " founded Jodhpur, and removed from Mandor.  
 1488 Rao Suloh, or Surajmal; rape of Rahnar virgins by Pathāns.  
 1510 Rao Gangā.  
 1521 Rao Muldeo becomes chief Rājā of Rājput; fortifies capital.  
 1568 " sends his son as hostage to Akbar; marriage alliance.  
 1583 Udaya Singh; Chandra Singh, upheld by clans, installed by Akbar.  
 1594 Sūr Singh; named Sīwal Rājā, a general in Moghul armies.  
 1610 Rājā Gaj Singh slain in Gajarah.  
 1637 Jowant Singh, died in Kabul.  
 1680 Ajit Singh, posthumous. Rahnar conflict at Delhi, 4th July, 1679 (7th Śravan, S. 1710); thirty years' war against empire. Murdered by his son.  
 1734 Akhey Singh; entitled Mahārāja Rājowar, 1728.  
 1749 Itim Singh, son, defeated by his uncle.  
 1749 Bakht Singh, who was poisoned in 1752.  
 1752 Vijaya Singh (Braj Singh) disputed possession with Itim Singh.  
 1793 Itim Singh usurps throne on his grandfather's death, by desert of Zulim Singh.  
 1803 Mān Singh. Fief for Kishna Kousari, the Udipur princess.

TABLE XXXI.—*The Bikaner Rāj, a scion of Jodhpur.*

- 1458 Dīka, son of Joda, settled in the Jit country.  
 1494 Nunkarna.  
 1512 Jast.  
 1546 Kalān Singh.  
 1573 Rāj Singh.  
 1631 Karn Singh.  
 1673 Anop Singh.  
 1708 Sarup Singh.  
 " Sujān Singh.  
 1730 Zurāwar Singh.  
 1746 Gaj Singh.  
 1766 Rāj Singh, poisoned in thirteen days by  
 1788 Surat Singh, regent, who usurped the throne.  
 1799 " vanquished Sartan Singh and Ajib Singh.  
 1804 " annexed Bhānser to his dominions.

TABLE XXXII.—*Rāns of Amber or Dhund'hār. Capital Jaypur.*

The Cuchwāla race of Rājputa claims descent from Cuch, second son of Rama, king of Ayudhya, who migrated and built the fort of Rotka, on the Sonā.

- 294 Rājā Nala, founded Narwar or Nishida.  
 Thirty-two princes—having the affix, Pāla.  
 965 Sura Singh.  
 966 Dhola (Dula) Rai, expelled from Narwar, founded Dhund'hār dynasty.  
 Kankul.

- Maldul Rao, took Amber from the Meenas.  
 Hunder.  
 Kuntal.  
 1183 Pujandova (Pajun), married daughter of Prithi Raja.  
 Malasi.  
 Bijal.  
 Rajdeo (Sahirdova? of Narwar, defeated by Mahmūd II. 1251, F.)  
 Kilar.  
 Kuntal.  
 Jansi.  
 Udayakarna—his son, Balaji, obtained Ameritair, called Shekhāvat, from his  
 grandson, Shekhji.  
 Nara Singh.  
 Bahir.  
 Udhara.  
 Chandrasen.  
 Prithi Raj, pilgrimage to Dewal on the Indus : murdered by  
 Bhimsa, his son.  
 Aiskarn.  
 1650? Baharmal (Pazarnal, W.), paid homage to Bahar.  
 1686? Bhagwan Das, Akbar's general, wedded his daughter to Jahāngir.  
 1692 Man Singh, ditto, governor of Bengal, Dakhn, Kabul.  
 1616 Bhao Singh, died of drinking.  
 1621 Mahā Singh, ditto.  
 1623? Jays Singh, Mirza Raja, poisoned by his son Kavat.  
 Ram Singh, reduced to musash of 4000.  
 Hichu Singh, ditto 3000.  
 1698 Siwai Jay Singh, founded Jaypur, published 'Zij Mahamudshāh.'  
 1742 Iswari Singh.  
 1760 Madhu Singh.  
 1778 Prithi Singh, II. minor.  
 1778 Purup Singh.  
 1803 get Singh, an effeminate prince, died without issue.  
 1818 Jay Singh, III. posthumous, believed supposititious.

[It is somewhat difficult to decide where each series of inscription princes, often of most circumscribed local power, may most fitly be inserted in the general list; under the claims of caste, the subjoined sovereigns should be classed with the Chohāns of Ajmir; and, under the geographical aspect again, their position might be determined by any one of the contiguous principalities by which the modern clump of Shekhāwati states is bounded. I have made them follow Jaypur, as to that kingdom they now belong.]

*Inscription on the Temple of Sri Harsha Shaktiwati. Samvat 1030.*

- |                    |                                  |
|--------------------|----------------------------------|
| 1. Gōvaka, Chohān. | 5. Vākpati.                      |
| 2. Chandra rāja.   | 6. Sinha rāja, 961 A.D.          |
| 3. Gōvaka.         | 7. Vīrgha rāja, of another race, |
| 4. Chandana.       | A.D. 973.                        |

['Jour. As. Soc. Beng.,' vol. iv., p. 367.]

#### TABLE XXXIII.—*Race of Jaisalmer.*

Dynasty of the Bhattis, a branch of the Yadu race of the Chandra Vansa, Tod.

- Naba, fled from Dwarka to Marusthal—(Bhāgavat).  
 Prithibahu—Khāra—Jad-bhān (from Bhatti chronicles).  
 Bāhu-bal, espoused daughter of Vijaya Singh, Malwa.  
 Bāhu, killed by a fall from his horse.

- Sobhān, poisoned by his wife, daughter of the Ajmēr Rājā, Mund.  
 Rājā married daughter of Bar Singh of Mālwa; invasion of Farid Shāh.  
 B.C. 94? Rājā Gaj, invaded Kandruphāl, in Kashmir.  
 A.D. 15? Salbahan, fifteen sons, all Rājās, conquered Panjāh, expelled from Kābul.  
 Bāland, invaded by Turks—his grandson, Chakito, source of Chakii tribe.  
 Kullur, eight sons, all became Musalmāns.  
 Jinj, seven ditto.  
 Bhatti, court at Lahor, gave name to family.  
 Mangal Rao, expelled by king of Ghazni—settled in Mēr.  
 Majum Rao, his son—  
 736 Katur, invaded by the Barahma, 787, A.D. 731.  
 733 Tannu, erected Bijmet.  
 813 Biji Rao, continual feuds with the Langas, till 1474. Title Rao exchanged  
 for Rawul.  
 Deoraj, extirpated several lakhs, one at Tannet.  
 Mundā.  
 1008 Ranchera, tributary to Anandapāl of Delhi; invaded by Mahmūd.  
 1043 Duna.  
 Bhodjoo conspired against and killed by his uncle.  
 1166 Jemā, slain in defending Lodhva. Removed capital to Jesalmēr.  
 1167 Salivahan II., throne usurped by his son, Biji.  
 1200 Kallan, elder brother, repelled the Khān of Baloch.  
 1218 Chachik Doo, extirpated Chamma Rājputs.  
 1260 Karan, repelled Muzaffar Khān.  
 1270 Lakhan Singh, an idiot, replaced by his son.  
 1274 Pūnpāl, dethroned by nobles.  
 1275 Jastai, recalled from Gujarat—defended fort for eight years.  
 1292 Mulrāj III., great sack of Jesalmēr by Mahdī Khān, 1294.  
 Duld, slotted Rāwul, second sack and immolation.  
 1306 Gursi re-established Jesalmēr.  
 Kāhar, adopted; feuds.  
 Rao Kallan, or Korora, conquered to the Indus—lived to 80.  
 Chachik Doo, fixed capital at Maroto; continued feuds.  
 1473 Beed, conquest of Multan by Bāhar.  
 Salul Singh, Jesalmēr becomes a fief of empire, under Rāwulā Jaid, Nunkarn,  
 Bhim, Manohar Das; conversion of Bhattā.  
 Umra Singh, predatory incursions.  
 1701 Jaswant, alliance with Mewār—end of Bhatti chronicle.  
 1622 Akhi Singh, Harp Singh minister potential.  
 1781 Mulrāja, ditto.  
 1820 Gaj Singh, ditto, under British protection.

[Although the dynasty of the Gurha Mundala Rājās can scarcely claim much prominence amid the sovereignties of the larger Indian states, yet the central position of their seat of government, and the fullness of the detail of names, render it possible that their annals may tend to throw a light upon the still obscure contemporaneous history of proximate lands.]

*History of the Gurha Mundala Rājās.* By the late Col. Sir W. H. Sleeman, formerly Commissioner for the suppression of Thuggee in the Nerbudda Provinces.

The dominions of the Gurha Mundala sovereigns extended before the death of Sungrām Sā, in the year A.D. 1530, over fifty-two districts, containing each from three hundred and fifty to seven hundred and fifty villages, and, collectively, no less than thirty-two thousand two hundred and eighty. But the greater part of these districts were added to their dominions by the conquests of that prince.

These princes trace back their origin in the person of Jadoo Rao to the year Samvat, 415, or A.D. 358, when, by the death of his father-in-law, the Gond Rāja Nagdeo, he succeeded to the throne of Garha. Mundala was added to their dominion by Gopāl Sā, the tenth in descent from that prince, about the year A.D. 634, in the conquest of the district of Marroogurh from the Gond chiefs, who had succeeded to the ancient Haihahumai sovereigns of Ratanpore and Lahnjoe. That this ancient family of Rājputs, who still reign at these places, reigned over Mundala up to the year A.D. 144 or Samvat, 201, was ascertained from an inscription in copper dug up during the reign of Nizām Sā (A.D. 1749) in the village of Dearee in the vicinity of that place. This inscription was in Sanskrit upon a copper plate of about two feet square, and purported to convey, as a free religious gift from a sovereign of the Haihahumai family, the village of Dearee in which it was found, to Dendatt, a Brahmin, and his heirs for ever. The plate was preserved in the palace with the greatest care up to the year 1780, when it was lost in the pillage of the place, and all search for it has since proved fruitless. There are, however, several highly respectable men still living who often saw it, and have a perfectly distinct recollection of its contents. How and when the Gonds succeeded this family in the sovereignty of Mundala we are never likely to learn; nor would it be very useful to inquire.

This family of Haihahumais reigned over Lahnjoe, formerly called Churpanatta; Ratanpore, formerly called Manepore; Mundala, formerly called Mahikantata (Mahikanti); and Sambulpore (Sambhalpur).

The Garha Mundala dynasty boast a Rājput origin, though they are not recognized to be genuine. Tradition says a soldier of fortune from Kandish, Jadoo Rao, entered the service of one of the Haihahumai sovereigns of Lahnjoe, and accompanied him on a pilgrimage to the source of the Nerbudda at Amarkantak, and eventually, in S. 415 = A.D. 358, succeeded the Gond Rāja of Garha.

When Jadoo Rao succeeded his father-in-law on the throne he appointed Surlikas Partak as his prime minister, and we have some good grounds to believe, what is altogether singular in the history of mankind, that the descendants of the one reigned as sovereigns of the country for a period of fourteen hundred years up to the Saugor conquest in Samvat 1838, or A.D. 1781; and that the descendants of the other held the office and discharged the duties of chief ministers for the same period. Among the sovereigns during this time, there are said to have been fifty generations and sixty-two successors to the throne, and among the ministers only forty generations. This would give to each reign something less than twenty-three years. In 1260 years France had only sixty-three kings, or one every twenty years.<sup>1</sup>

I shall here give a list of the sovereigns, with the number of years each is said to have reigned.<sup>2</sup> This list, as far as the reign of Prem Narain, the 58th of this line, is found engraven in Sanskrit upon a stone in a temple built by the son and successor of that prince at Ramnagar, near Mundala. It is said to have been extracted from records to which the compiler, Jyotibind Bajpai, had access; and good grounds to rely on the authenticity of this record for above a thousand years may be found in the inscriptions on the different temples built by the several princes of this house, bearing dates which correspond with it; and in the collateral history

<sup>1</sup> In one hundred and sixty years Rome had no less than seventy Emperors. In two hundred and fifty years the Memelukes had in Egypt forty-seven sovereigns; and a reign terminated only with a life. The Ooths had in Spain, in three hundred years, thirty-two kings.

<sup>2</sup> We have not altered the system of orthography followed by the author, although at variance with Sir W. Jones' scheme, because there are some names for which we should be at a loss to find the classical equivalents.—J. P.

of the Muhammadans and others who invaded these territories during their reign. The inscription on the stone runs thus: 'Friday, the 28th of Jet, in the year Samvat, 1724 (A.D. 1667), the prince Hirdes Sâ reigning, the following is written by Suda Sen, at the dictation of Jyghabâd Bajee, and engraved by Singh Sâ, Dya Ram, and Bhagi Bates.'

As an instance which collateral history furnishes in proof of the authenticity of this record, it may be stated that Ferishta places the invasion of Gurha by Asuf in the year Hijra 972, or A.D. 1564; and states that the young prince, Beer Narain, had then attained his eighteenth year. The inscription on the stone would place the death of Dulpat Sâ, his father, in Samvat 1605, or A.D. 1548; as it gives 1190 years to the forty-nine reigns, and the first reign commenced in 415. The young prince is stated to have reigned fifteen years, and tradition represents him as three years of age at his father's death. This would make him eighteen previously, and, added to 1548, would place the invasion 1663 A.D.

	Years.		Years.
1 Jadoo Rao, An. Sam. 415, reigned	5	25 Otar Beya, his son, reigned	36
2 Madhoo Singh, his son	33	26 Rao Subee, ditto	24
3 Jugurnâth, ditto	20	27 Tarachund, ditto	34
4 Rajenâth, ditto	64	28 Ode Singh, ditto	15
5 Bolar Das, ditto	28	29 Bhan Mitter, ditto	16
6 Beharee Singh, ditto	31	30 Bhawanee Das, ditto	12
7 Nursing Das, ditto	33	31 Sae Singh, ditto	28
8 Sooraj Bhan, ditto	29	32 Harraon, ditto	5
9 Bas Das, ditto	18	33 Sobal Singh, ditto	29
10 Gopal Sâ, ditto	21	34 Raj Singh, ditto	31
11 Bhepal Sâ, ditto	10	35 Dadas Rao, ditto	37
12 Gopernâth, ditto	37	36 Gurak Das, ditto	26
13 Ramchand, ditto	13	37 Arjun Singh, ditto	32
14 Soorian Singh, ditto	29	38 Sangram Sâ, ditto	50
15 Harshar Das, ditto	17	39 Dulpat Sâ, ditto	18
16 Kishan Das, ditto	14	40 Deernaroon, ditto	15
17 Jugat Sing, ditto	9	41 Chander Sâ, his paternal uncle	12
18 Muha Sing, ditto	23	42 Mukhar Sâ, his son	20
19 Dourjun Mal, ditto	19	43 Prem Nansen, ditto	11
20 Jaskaran, ditto	35	44 Hirdes Sâ, ditto	71
21 Partapadit, ditto	24	45 Chatter Sâ, ditto	7
22 Jaschand, ditto	14	46 Keesoo Sâ, ditto	3
23 Munsur Singh, ditto	29	47 Narind Sâ, ditto (ob. A.D. 1731)	54
24 Gohind Singh, ditto	25	48 Mohraj Sâ, ditto	11
25 Ramchand, ditto	21	49 Sooraj Sâ, ditto (ob. A.D. 1749)	27
26 Kurun, ditto	16	50 Dourjun Sâ, ditto	2
27 Ratun Beya, ditto	21	51 Niram Sâ, his paternal uncle (ob. 1776 A.D.)	27
28 Kumal Nyne, ditto	7	52 Narkur Sâ, his nephew, son of Dhan Singh, brother of Niram Sâ, but of a different mother (ob. 1782)	3
29 Beer Singh, ditto	26	53 Somero Sâ, ditto, 9 months (ob. 1804)	
30 Narkur Das, ditto	23		
31 Toot Bobun Rao, ditto	21		
32 Prothes Rao, ditto	21		
33 Bhartea Chund, his son	22		
34 Mulun Singh, ditto	20		

At the close of the reign of Sangram Sâ the dominion of the Gurha Mundala rajas extended over fifty-two districts, but it is believed that he received from his father only three or four of these districts.

<sup>1</sup> [Invasion by Asuf Khân, the imperial viceroy at Kurha Mânkyur, in 1564 A.D.]

<sup>2</sup> [Invasion by Balajee Bajee Rao, A.D. 1742. See also Captain Fells' Inscription, 'As. Res.', vol. IV. p. 43.7]

[The two inscriptions which follow refer more or less to localities proximate to the site of the country whose history forms the subject of the preceding remarks.]

*Inscription from Khajurao, near Chaturpur, dated 1019 Samvat = 962 A.D.*

1 Nandaka.	5 Sri Karna.
2 Vag Yati.	6 Yaso-dharma deva.
3 Vijaya.	7 Bonga.
4 Vibala.	8 Jaya-varma deva.

This inscription possesses an adventitious interest in the fact, recorded in its text, relative to its having been engraved, 1st, in irregular letters; 2nd, in clear character; and 3rd, 54 years afterwards (S. 1173), re-engraved in *Kakada* characters.—*Jour. As. Soc. Beng.*, vol. viii. p. 186.

*Kumbhi (35 miles N.E. of Jabalpur) Nagpur territory: Inscription, S. 932 = A.D. 876.*

*Dynasty entitled Kula-Churi.*

1 Yuvh-Raja-deva, a descendant of	4 Karna-deva.
Kartta Viryya, of the race of	5 Yaso Karna-deva.
Bharat.	6 Gaja Karna.
2 Kokalla.	7 Nara Singha.
3 Gangaya-deva.	8 Vijaya Singha.

—*Jour. As. Soc. Beng.*, vol. viii. p. 451.

[Mr. Ommanney, in forwarding the Multaye plates, of which the translation is subjoined, prefaces them with a few remarks:—]

There are no such names as Datta Raja,<sup>1</sup> Govinda Raja, Mārwamika Raja,<sup>2</sup> or Nanda Raja, in the catalogue of Garha Mandala Rajas. They may be descendants of Bahkt Bahad of Durgah Bahadli, but it is not probable. It appears that they were Rahunas (Rashtra kutas), but still they were called Gharuwa or Gond,<sup>3</sup> which induces me still to think they must have reigned somewhere in these parts. The villages mentioned have not the slightest resemblance in name to any in this district, nor can I discover any at all like them at Hoshangabad or Jabalpur.

[In commenting on Mr. Ommanney's communication, Prinsep adds:—]

One of the most obvious corrections is that of the name on the seal, and in the second line of the third page, where the plate is much worn, viz., Yudhāsura in lieu of Yudhāsura, which the Sudr Amia apparently supposed a corruption of Yudhish-thira. The first name also read as Datta Raja should be Durgga Raja.

But the most material correction applies to the date, which Mr. Ommanney interprets as Samvat 1636, or A.D. 1573. The alphabetical type at once proves that this supposition is many centuries too modern, nor do I clearly see how the pandit could so far have misled his master in the translation, seeing that the text is read by Mr. Ommanney himself and the pandit *śāstraka śāstraka tranṣlatāraka*. The

<sup>1</sup> I read this name Durgga Raja.—J. P.

<sup>2</sup> The Sudr Amia reads Mārwamika Raja; but it is probable that the text should be understood as Srinat-Swāmika Raja.—J. P.

<sup>3</sup> The word supposed to be Gharuwa is precisely the same as that on the seal, the surname of the Raja, Yudhāsura, the 'hero in battle,' so that the connection with the Gond tribes cannot be thence deduced.—J. P.

obvious meaning of this is six hundred and thirty besides,—just about the period we should have assigned to the writing on comparison with the Gupta and Gujarkii styles. But it is not at all certain that this is the correct reading, or that the era can be assumed to be that of Vikramāditya. The precise letters in modern character are,

### शक काले संवत्सरे षत्तये ॥ त्रयोत्तरये

*Saka kālī samvatsarī śatśarē 11 triśottarīśarē.*

Now, in the first place, the era is here that of Saka or Salivāhana; in the next, after the word *śatśarē*, hundreds, is the plural number, two unknown characters follow which may be very probably numerals. The second has much resemblance to the modern ८ or eight, but the first is unknown and of a complex form; its central part reminds us of the equally enigmatical numeral in one of the Bhillas inscriptions. It may, perhaps, designate in a cipher the word *sakā* शक, 'in numerals,' thus purporting 'in the year of Saka, hundreds, numerically eight, and thirty over.' A fertile imagination might again convert the cipher into the word *षट्* ṣaṭ, eight, afterwards expressed in figures; but I must leave this curious point for future elucidation, wavering between 630 and 830 for the date of the document, which in either case is of considerable antiquity, and indeed one of the most ancient of such records yet brought to light containing a date.

#### TRANSLATION OF THE MULTAYE PLATES.

(On the Seal) Śrī Yuddhasura (the adopted name of the prince).

Swasti! Sprung of the pleasing lineage of the Rāshtrakūṭa (Rāshtr), like the moon from the ocean of milk, was the Prince Śrī Durgā Rāja through whose conciliatory conduct to the meritorious, and his vigorous energy, extending his rule to the ocean, secured him the good-will of both parties (his friends and enemies). His son was Gorinda Rāja, whose fame was earned in many a battle; from him was born the self-controlling and fortunate Prince Māṣamūka Rāja, the unrivalled, whose valour is everywhere the theme of song, who never turned his back in battle, and was always victorious. His son is Śrī Nanda Rāja, much respected by the pious; handsome, accomplished, humane, faultless, a dreadful avenger (*kālā*) on his enemies; foremost of the aspirants for military renown, chief of the dignified, and prominent among the active and intelligent, the very tree of desire (*kaṃśa druma*) to the necessitous.

All natural and acquired qualities seek refuge in his virtuous breast, a firm Brāhmana—a firm Bhāgavata—his surname is Śrī Yuddhasura<sup>1</sup> (the hero of battle). He hereby proclaims to all his officers, nobles, and the holders of villages, 'Be it known to all of you that we, for the promotion of our father and mother's virtues, consecrating with water, present to Śrī Praṇka Caturveda, of the Kāśīya tribe, the grandson of Mītra Caturveda, and son of Rana Praṇka Caturveda, the village named Jain Kūha, bounded on the west by Kīṇī-vajāra, on the north by Pīpparīkṣā, on the east by Jāḷakā, and by Ujānagrāma on the south,—on the full moon of the month of Kārtika.

Let this gift be held unobjectionable and inviolate by our own posterity, and by princes of other lines. Should any whose mind is blinded with ignorance take it away, or be accessory to its resumption by others, he will be guilty of the five great sins.

It is declared by the divine Vyāsa, the compiler of the Vedas, 'Many kings have

<sup>1</sup> That is, a rigid disciple of Viṣṇu.

<sup>2</sup> Mr. Osmanney reads 'Ghorowa Śar' (Ghorowa the Sanscrit for Goud), but the word is evidently the same as that on the seal.



in turn ruled over this earth, yet he who reigneth for the time is then sole enjoyer of the fruits thereof. \*The bestower of lands will live sixty thousand years in heaven, but he who resumes it, or takes pleasure in its resumption, is doomed to hell for an equal period.\*

In the *Shukakāl*, six<sup>1</sup> hundred and thirty years over, was written this edict (*Sāsānām*): Kula, the well-skilled in peace and war, wrote it.

TABLE XXXIV.—*Orissa, Or-Desa, or Athala-Desa, had. Uttack.*

From the *Vannavāl*, and *Ekja Charitra*, in the Uria language, preserved in the temple of Jagannāth, a record supposed to have been commenced in the 12th century. —Stirling's 'Account of Cuttack.' 'As. Res.' vol. xv., p. 267.

After the usual detail of the Mythology, and early kings of India, down to Vikramāditya.

- A.D.  
 142 Bato Kesari.<sup>2</sup>  
 103 Tirbhoban deva.  
 236 Nirmal deva.  
 261 Bhima deva.  
 318 Subhan deva. Rakta bahu invaded Jagannāth by sea, destroyed by an inundation of the sea, that also formed the Chilka lake.  
 Indra deva was captured and displaced by the Yavanas, who reigned for 146 years.

KESARI-YANNA KINTOROD.

- 473 Jajati (Yajñi) Kesari, capital Jajapur.  
 Suraj Kesari.

<sup>1</sup> I have kept here *Shakana* as read by Mr. Osmannery.—J. P.

<sup>2</sup> Mr. Stirling says\* that 'no information whatever is afforded by the Orissa chronicles of the origin of the princes called the Kesari yanna; the founder of the new dynasty in A.D. 473 was Jajati (Yajñi) Kesari, a warlike and energetic prince, but who he was or whence he came we are not apprised. He soon cleared his dominions of the Yavanas, who then retired to their own country.' Perhaps the present inscription may in some measure remove this obscurity. It commences with the conquest of Udhra or Orissa by Janamejaya, the king of Tilinga. It is possible that this alludes to the prince of that name in the Puranic lists, but the locality of his dominion and the names of his immediate successors are wholly different from those of the Magadha line, and their history is circumstantially told as of events transpired not long antecedent to the Kesari dynasty of Orissa. His son was Dirgharava, and from the latter was born Apavira, who died without issue. The kingdom was then overrun by invaders from foreign countries (perhaps the same designated as Yavanas in Stirling's 'Chronicles'), when Vichitravira, another descendant of Janamejaya reigning in a neighbouring kingdom, possessed himself of Orissa. His son was named Abhimanyu; his again Chandihara; and from the latter descended Udyotaka Kesari, whose mother, Kolaravi, erected the temple to Siva as Brahmarvara. The date of the inscription is expressed only in terms of the reign, but, from the style of the Devanāgarī, it may be confidently affirmed to be later than the epoch fixed for *Lalit Indra Kesari* (617 A.D.). Udyotaka Kesari must, then, be one of the thirty-two unrecorded princes who succeeded him in the Kesari line previous to the establishment of the Gangavama family on the Cuttack throne. The figure 3, it may be remarked, closely resembles the ancient form of this numeral; the 8 is nearly of the modern shape.

[The following is the list of names supplied by this inscription:—]

1. Janamejaya.—2. Dirgharava.—3. Apavira.—4. Vichitravira.—5. Abhimanyu.—6. Chandihara.—7. Udyotaka Kesari.—On the 3rd of the light half of Pūṣyama of the Samvat 18, of the victorious reign of rāja Udyotaka Kesari Deva, who was most rich, king of kings, a rāṣṭra of the lunar line and lord of Kalinga. 'Jour. As. Soc. Beng.' October, 1837.

\* 'As. Res.' vol. xv., p. 265.

Ananta Kesari.

- 617 Lakṣmī Indra Kesari, built the Bhuvanewar temple, 557.  
Thirty-two reigns, extending 455 years. Cuttack built, 989.

GANGA-VAMSA.

- |      |                                                                                                             |                                                   |
|------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| 1131 | Churung, Saranga-deva, or Chaur Ganga, invaded Orissa.                                                      | Tribhuvana.<br>Mala Deva.<br>Prolī.<br>Rudradeva. |
| 1151 | Gangadewara deva, extended dominions.                                                                       |                                                   |
| 1174 | Ananga Bhima deva, succeeded Gajapati throne; endowed Jagannāth; struck coin; title Rāwat Rāj. <sup>2</sup> |                                                   |
| 1201 | Rājewara deva.                                                                                              |                                                   |
| 1236 | Rāja Narsinh deva, built Kanāruk (black pagoda) 1277.                                                       |                                                   |

FIVE NARA SINGHAS AND SIX SHĀWUS, CALLED THE SURAJ-VAMSA RĀJAS.

- 1451 Kapil Indra deva, adopted by the last Bhīma, assisted Telinga Rāja against Muslimans, 1457.  
 (Himber? Rāj of Uris, according to Feriāhta.)  
 1478 Puruṣottam deva, conquers Ganjavarana.  
 1502 Purṣab Bhūra deva, left thirty-two sons, all murdered by  
 1524 Govind deva, his minister.  
 1531 Purṣab Chakra deva, the last of the dynasty.  
 1539 Narsinha Janna, deposed by  
 1550 Telinga Mukund deva, (Harichandan) invaded, and sovereignty of Orissa overthrown, by King of Bengal, 1558.

<sup>1</sup> This inscription is stated to be engraved on a slab about six or seven feet high, which is to be found close to the temple of Rudradeva at Warangal, the modern name for the ancient capital of the Telingana rājas, called in this inscription *Arumathunda-pura* or *patana*. The inscription,—that is, its commencement and close, excluding the Sanskrit slokas,—is in an old dialect of mixed Telugu and Gorya. It is valuable as containing the genealogy of rāja Rudradeva, and as showing that the previous dynasty established at Warangal was overthrown and displaced by his father, called Prolī rāja. The inscription gives an authentic date also for the reign of Rudradeva in Telingana, viz., 1054 Saka, corresponding with 1132 A.D., and shows this to be the rāja, called in the temple annals of Jagannāth, Churung or Chotungu, who is said to have overthrown Katak coming from the Karnatik, and to have founded or established the Gunga-vamśa dynasty in the very year of this inscription, viz., 1054 Saka. Rāja Rudradeva is mentioned as a benefactor of Jagannāth, and Katak is included in the boundaries which are assigned to his dominions at that period. These are described in the inscription as extending as far as the sea to the east; the Sruo Salla? mountains to the south; as far in another direction, which must be west, as Bākatāka; while to the north his rule extended as far as the Malyavanta, now perhaps the Malyagiri, mountains, west of Balaswar.—1. Tribhuvana, a great warrior, of the Kākalya race.—2. Mala Deva, 'chief of the Kākalya rājas'.—3. Prolī rāja, the son of Mala Deva, reduces Govind rāja, king of Tailapa? gives back his kingdom to the king of Erha,\* conquers and brands the founder of Nādīa? in Mantra-kutnagar, and because the Erha rāja declines to join in the expedition, expels him afterwards from his rāj.—4. Rudradeva. Ascendancy gained by Bhīma rāja (half-brother of Rudradeva), consequent upon the death of the Gokarna rāja, the Cherbādāya rāja, and the king of Tailapa; inflated with these successes, he ventures to defy Rudradeva. Bhīma flies in terror.

\* [Rhabanewar (in Orissa) Inscription. 'Jour. As. Soc. Beng.' vol. vi., p. 278. *Ajayanātha Bhīma*, the brother of "an excellent man," who had come to the throne through marriage with Sursma, the daughter of Ahirama. Prinsep adds, 'the date of Ananga Bhīma also agrees closely with what was assumed from the style of the alphabet and the Samvat 32 of the Bhau-deva slab (inscription in As. Soc. Museum, vol. vi., p. 88, 'Jour. As. Soc. Beng.'). It will hence become a question whether

\* The pundits say this is not Orissa, which always in the old dialects is written *Cordha* Des.

## KURDA RĀJAS; BHUĪ-VANSA, OR KEMINDĀNĪ RACE.

1580	Ramchandra deo, titular Rāja under Akbar.
1609	Purshotam deo. Afghan incursions.
1630	Narsinh deo.
1655	Gangadhar deo.
1656	Balbhadder deo.
1664	Mukund deo.
1692	Dirb Singh deo.
1715	Harikishen deo.
1720	Gopināth deo.
1727	Ramchandra deo. Boundary much reduced.
1743	Birkishore deo. Mahratta depredations.
1786	Dirb Singh deo, attached to Nāgpur, 1755-6.
1798	Mukund Deo, deposed by the English, 1804.

TABLE XXXV.—*Rājas of Nepāl.*

The mythology of Nepāl commences, like that of Kashmir, with the dedication of the valley, for ages full of water, by a Muni called Nalaguni whence the name of the country Nālpāla, whose descendants awayed the sceptre for near 500 years.—Kirkpatrick's 'Nipal.'

a.c. 3503	Bharināthgah (adjusted back at 18 years per reign, a.c. 844?)	a.c. 5423	Jayagupta II., overcome by Rājputs of the Terai, near Janakpur, a.c. 700?
3705	Jayagupta.	5211	Bal Sinha, descendant of Mahipā Ojdhla.
3722	Purnagupta.	5202	Jaya Sinha.
3631	Sri Harkh.	5281	Bhuvān Sinha, overcome by the
3564	Bhimagupta.		
3526	Munigupta.		
3489	Bhānugupta.		

## KURDĀ TRIBE OF EASTERN MOUNTAINEERS.

2240	Yelling, adjusted date, a.c. 646?	2049	Srupast.
2160	Dakhom.	2010	Parb.
2113	Balāncha.	2054	Jety dastri.
2081	Kingli.	2704	Panchem.
2040	Hemant.	2723	King-king-king.
2090	Tukhah.	2007	Somud.
		2527	Thund.

these figures are, in all cases, to be referred to a Caltack era, or whether the same Devanāgarī alphabet was in use from Shikawāti to Benares, Dinajpur, and Orissa, in the 12th century, while such princes had then an era of his own.' Jour. As. Soc. Beng., vol. vi, p. 280.]

[The fellow inscription alluded to is to the following effect:—]

This inscription is without date; but the form of the letters and the names of persons mentioned will probably render the fixing of its age an easy matter to those conversant with such subjects. It was composed by a pundit named Sri Vāchaspati, in praise of a brāhman of rank and learning, styled Bhāta Sri Bhava-deva, and his family; and it would appear that the slab on which it is engraved must have been affixed to some temple of which Bhava-deva was the founder. The individuals of this family, whose names are given, are—1. Sāvarna Muni, the root of the gotra or line.—2. Bhava-deva 1st, a descendant of the above, whose elder and younger brothers were Mahā-deva and Attahā.—3. Rathāng, son of the above, who had seven younger brothers.—4. Atyanga, son of the above.—5. Bodha, son of the above, surnamed Sphurita.—6. Adh-deva, son of the above.—7. Govardhana, son of the above, whose mother's name was Devaki.—8. Bhava-deva 2nd, son of the above, surnamed Bāla-valabhi-bhujanga, whose mother's name was Śāngokk, and who was minister to Rāja Harivarma-deva and his son.

2468	Jaigri.	2665	Teskā.
2488	Jennes.	2619	Sungmia.
2425	Suenkeh.	1950	Jasha.
2365	Thar.	1887	Gentho.
2294	Thuma.	1813	Kimblām.
2211	Barmah.	1739	Galiyang, displaced by Khatri of the
2128	Gunjak.		
—	Kashlām.		

SUNYA-VARMA RACE.

1668	Nevesit (adjusted date of conquest, A.D. 178).	734	Vaan datta varma.
1608	Matta Rāto.	691	Sripatri.
1517	Kalkvarma.	688	Siva viddi.
1441	Paruposh deva (founded Paspānāś).	611	Vasanta deva.
1385	Bhaskar varma, a great conqueror.	650	Deva.
1311	Bhumī varma.	493	Beikā (Vriksha) deva.
1270	Chandrea varma.	438	Sankara deva.
1249	Jaya varma.	386	Brakma deva.
1187	Vrisha varma.	335	Mān deva, erected Samhūnāth mūndī.
1130	Surva varma.	297	Māhe deva.
1081	Pathi (Prithi) varma.	247	Vasanta deva.
1025	Jist (Jayertha) varma.	190	Udaya deva.
977	Kuber (Kuvera) varma.	143	Mān deva, II., three years' drought.
901	Hari varma.	98	Sakam.
824	Siddhi varma.	48	Siva deva.
763	Haridatta varma (founded Bapa Narayan temple).	6	Narendra deva.
		A.D. 27	Bhima deva, varma, displaced by the

ANILAS, OR ORIGINAL SOVEREIGNS.

43	Bichen Gupta.	178	Bhūmī Gupta, expelled by
117	Krishna Gupta.		

THE NEWAR DYNASTY, RESTORED.

218	Siva deva varma (adjusted date, A.D. 470).	773	Soho deva.
209	Angtho varma.	807	Vikrama deva.
301	Kirtu varma.	808	Narendra deva.
319	Bhima Arjuna deva.	810	Ganākama deva.*
258	Nanda deva.	835	Udaya deva.
271	Siva deva.	901	Narbhay deva.
387	Narendra deva.	908	Bhoj deva bhadrā.
424	Bala deva.	917	Lakshmi kām deva datta.
441	Sankara deva.	938	Jaya deva, reduced Putan.
453	Bhima Arjuna deva, II.	958	Udaya deva.
469	Jaya deva.	966	Bala deva.
488	Sri bala deva.	977	Padmā deva.
504	Kondara deva.	984	Nag Arjuna.
531	Jaya deva, II.	987	Sankar deva.
574	Bala deva, III.	1004	Bam deva.
585	Balanjun deva.	1006	Sri Hark deva.
622	Raghava deva (adjusted date, A.D. 830 <sup>1</sup> ).	1023	Siva deva.
986	Sikar deva.*	1050	Indra deva.
		1062	Mān deva.
		1067	Narendra deva.

<sup>1</sup> This is exactly the first year of the Newar era. He, it is said, introduced the Samvat into Nepal, which may apply to this, and not to the era of Vikramāditya. (With one or two exceptions, marked \*, these reigns are of natural lengths, and require no adjustment.)

1073	Rudra deva.*	1195	Anyu mall—a female.
1153	Anurita deva (a great dearth).	1244	Ohhaya mall, ditto, and earth-quake.
1157	Somesar deva.	1246	Jaya deva.
1164	Bas kint deva.		
1280	Anwanta mall deva. Kinias and Tibet families settled in Nepál, Samvat 1344, A.D. 1287.		
	Jayamanda deva.		
	Jaya sinha mall.		
	Jaya Raora mall, daughter married Hari Chandra, Raja of Benares—his daughter, Raj Lachmi, succeeded, but was deposed by		
1323	Jaya deva, who was dispossessed of the throne by		
1323	Hara sinha deva, Raja of Simroun, who was expelled from his own dominions by the Patan sovereign of Dilli. (See below.)		
	Belal Sinha, capital Bhatsgan.		
	Sei deva mall.		
	Naya mall.		
	Ajoka mall.		
	Jestili mall.		
	Jait mall.		
Newar year.			
1731 1690	Jaya Eksha Mall (or Jye Kush Mall), divided Patan, Khatmandu, Banepa, and Bhatsgan between his daughter and three sons.		

## BHATSAN.

		Daya Malla.
		Isha Bhat mall.
		Besant mall.
790-800 1659-79		Jaya Chakra mall.
		Trihoka mall.
		Jagat Joti mall.
		Jay Jata mitra mall.
816 1695		Bhupati Indra mall.
842 1721		Ranjit mall, formed alliance with Gorkha, which ended in his subversion, and finally that of all Nepál.

## BANEP.

Newar year.		Ran Malla.
		KHATMANDU.
		Rates mall.
783 1633		Jaya Prakas mall.
777 1695		Pratap mall.
793 1692		Jaya Yoga Prakas mall.
816 1695		Jaya Prakas mall.
822 1701		Bhaskara mall.
836 1715		Mahendra mall.
843 1722		Jaya Jagat Jaya mall.
845 1724		Jaya Yoga Prakas mall, from Patan.
874 1783		

## PATAN.

Newar year.		Newar year.		Rishi nirmal deva.
775 1654		837 1715		Jaya Zughir Yoga mall deva.
806 1685		843 1722		Jaya Vichya mall.
810 1689		846-42 1729-31		Jaya Yoga Prakas mall deva.
816 1695		863 1742		Jaya Vichya mall Agni.
817 1696				
827 1705		870 1749-5		
836 1715				

GURKHALI DYNASTY, DESCENDED FROM THE CHATAPUR RAJPUTS, OCCUPIED BHAUN AND NOAKOT, FOR SIX OR EIGHT GENERATIONS, PRIOR TO CONQUEST OF NEPAL.

A.D.

1690 1708	Prithvireyan Sah.
1693 1771	Pertab Sinha Sah deva.
1697 1775	Ran Bahadur (Bahadur Sah regent), deposed by nobles, 1800.
1722 1802	Girvan Yudd Vikrama Sah deva.

\* [The dates in the Newar cycle inserted in this table were written in by Jas. Princep, on the printed page of his own copy of the 'Useful Tables.']

A.S.		
1726	1804	Ram Bahādur, returns from Benares, deposed and assassinated.
1727	1805	Girvan Yodh Vikrama Sāh deva, again.
1738	1816	Rajendra Vikrama Sāh deva.

The Khatmandu and Patan names, and all the dates from 1632 downwards, are confirmed by Nepālese coins in my possession, collected by Dr. Branley.—J.P.

TABLE XXXVI.—*Rājas of Samangarha, or Simroun, in the Tardi, south of Nepāl.*

FROM KIRKPATRICK.		FROM HODGSON'S LIST, 'JOURN. AS. SOC.' vol. iv. p. 123.	
A.D.			
844	Nāma deva.		Nānyupa deva, founded Simroun, A.D. 1097.
	Kanok deva.		Ganga deva.
	Narsinha deva.		Nars Sinha deva.
	Rāma Sinha deva.		Rāma Sinha deva.
	Bhad Sinha deva.		Sakti Sinha deva.
	Karm Sinha deva.		
1323	Hars Sinha deva.		Hars Sinha deva, compelled to abandon his capital and take refuge in the hills, when Simroun was destroyed by Tughlak Shāh, in 1323 A.D. See above for his connection with the Rāj of Nepāl.

TABLE XXXVII.—*Rājas of Bengal, capitals, Kanauj?—Gaur.*

Abul Fazl enumerates three Dynasties anterior to the family of Bhupāla, which last is identified by inscriptions found at Benares, Monghir, Dinajpur, etc., viz. :—

The family of Bhugrat (Bhāgiratha), Kabatriya—24 princes, reigned 2418 years.

The family of Bhogurya, Kaith—9 princes, reigned 250 years.

The family of Udeour (Adhur), Kaith—11 princes, reigned 714 years.

Then follows the family of Bhupāl, to whose 10 reigns 689 years are allotted, which is evidently too much; the succession of names differs also somewhat from those of the inscriptions.

FROM ABU'L FAZL.		MONGHIR PLATE. <sup>1</sup>		DINAJPUR COPPER-PLATE.	
'Ayin-i Akbari,' vol. ii. p. 21.		Gopāla.		Lokupāla.	
Bhopāla.		Dhormapāla.		Dhormapāla.	
1027 Dhirpāla.		Devapāla.		Jayapāla.	
1050 Doopāla.		SUDAL PLATE.		Devapāla.	
Bhupatipāla.		Rājapāla.		Narkyanpāla?	
Dharmatipāla.		Sarpāla.		(Two names illegible.)	
Bijjanpāla.		Nārāyanpāla.		Rājapāla.	
Jeyapāla.		SAKSHI INSCRIPTION.		Vigrahapāla.	
Rājapāla.		Mahipāla.		Mahipāla, at Benares.	
Bhogpāla.		Sthirapāla.		Nayapāla.	
Jagadpāla.		Vasantapāla.		1027 Vigrahapāla.	
		1017 Kumarpāla (Fer.)			

<sup>1</sup> The Monghir plate, dated 23 or 123 Samvat, evidently refers to the Bhupāla dynasty, and not to the Vikramāditya era, as was supposed by Wilkins.—J.P.

VAIDYA RĀJAS OF BENGAL.
1063 Sukh Sena.
1096 Balal Sena, built the town of Gaur.
1116 Lakshman Sena.
1123 Mādhaba Sena.
1133 Kṛṣṇa Sena.
1151 Sora Sena.
1154 Nārāyaṇa—Noujeb, last rāja of Abu'l Fazl's list. Lakshmana.
1200 Lakshmaniya. (See Muhammadan dynasties).

BĀKERGANJ INSCRIPTION,<sup>1</sup> 1136 A.D.

Vijaya Sena.
Bullāla Sena.
Lakshmana Sena.
Kṛṣṇa Sena.

<sup>1</sup> [The purport of the whole inscription is, a grant in perpetuity to a brāhman named Iswara deva varma, of the Vāisa tribe, of the villages of Bāgūlā, Bettagāta, and Udyamda, situated between four equally unknown places in Banga, or Bengal: unless Garbhagāta be Ghoragāta in the Dinājpur, or Vikramapur, the place of that name in the Decree district. The mention of tanks of fresh water, with houses built on the raised banks for protection against inundation,—of the neighbouring jungle in the west, and of the saline soils, is in favour of the locality being in the Bākerganj district itself, on the edge of the Sundarbans, where sea salt is still manufactured. Probably the Chanda Bhanda tribe, made over as property along with the soil, may have been the poor class named from this tract (quasi Bhandabanda, so, indeed, it is generally pronounced) employed in the salt works, and, like the modern Molangis, only a step or two removed from slavery. Regarding the Vaidya dynasty of Bengal (so called from its founder being of the medical caste), there is the same uncertainty as in almost all other portions of Indian history. Some make Adisar the progenitor: he who is stated to have applied to the reigning king of Kanauj, Kanyakubja, for a supply of brāhmanas for the Bengal provinces; but the catalogue recorded, on good authority, in the 'Ayn-i Akbari,' places the whole of the Bhupāla dynasty, extending to 698 years, between Adisar and Sukh Sena, the father of Bullāla Sena, who built the fort of Gaur. No mention of either of these parties is made in the present inscription, but on the contrary, the father of Bullāla Sena is distinctly stated to be Vijaya Sena; and as this is, I believe, the first copper-plate record of a grant by the family, we should give it the preference to books or traditions, on a point of history so near its own time: for Kṛṣṇa Sena is but the fourth in descent from Vijaya on the plate; or the fifth, if we take Abu'l Fazl's list. It is curious that wherever the name of Kṛṣṇa Sena occurs on the plate there are marks of an erasure; as if the grant had been prepared during the reign of Mādhaba Sena, and, on his dying before it was completed (for such a plate must have taken a long time to engrave), the name of his successor, Kṛṣṇa, fortunately happening to be of the same prosodial quantity, was ingeniously substituted, and *scilicet* *scilicet*, the endowment was completed and promulgated. Kṛṣṇa must have been in this case the brother of Mādhaba. Little of the historical occurrences of Kṛṣṇa's reign are to be gathered from the inflated eulogistic style common to this species of composition. It is said, in general terms, that he kept his enemies in awe, that he was religious and bountiful to the priesthood. The title of Śankara Gaṇeśwara, applied to all the members of the family, may mean either the auspicious family of the city of Gaur, or it may convey a sly hint, by the substitution of गङ्गा for गङ्गा (mixed race) of the inferior caste of the Sena dynasty. Nothing is said of the miraculous descent of Bullāla Sena, as before remarked; but he is said to have worshipped Ś'iva for many hundred years (in former generations) to obtain so famous a son as Lakshmana Sena,—who seems to have been the hero of the family,—erecting pillars of victory and altars at Benares, Allahabad, and Jagannātha. It may, however, be reasonably doubted whether these monuments of his greatness ever existed elsewhere than in the poet's imagination. The date of the grant is very clearly written in the lowermost line स ३ वीरदिने *samvat 3 vīradine* ... but the rest is not legible. The third year doubtless refers to the reign of Kṛṣṇa Sena, which brings the age of the plate to the year 1136 of our era.]



TABLE XXXVIII.—*Rajae of Assam—anciently Kamrup.*

The best authority is a Native History ('Assam Baranji') by Holiram Dhakityal Phukan, of Gohāti. Bengal, era 1235. 'As Jour.' 1839, p. 297; also Mr. Scott's MS. Notes, arranged by Dr. McCook.—Buchanan is not to be trusted prior to Rudra Sinha. [Turpur inscription, 'Jour. As. Soc. Beng.' vol. ix., p. 766.]

After bringing down the genealogies to the Kachatriya dynasty of Dravir (Dharmapha, etc., who invited brāhmins from Gaur to his court, north of the Brāhmaputra!)

BRĀHMARĀTRA DYNASTY, 560 YEARS.

Shraṇka, or Arimata, built fort of Vidyagarh.

Phaingrupa, an usurper of the name of Kamatashwar.

Gujanke, former line restored.

Shukarunku.

Mrigunku, without issue; died A.D. 1478.

Assam divided into 12 petty states.

1498 ——— invaded by Dulal Ghāzi, son of Humāi Shāh.

Musundār Ghāzi.

Sultān Ghāsiuddīn; after whom 12 states restored, of which Nara, east of Samsar, had been gradually rising into power since the middle of the 13th century.

INDRATĀNKA (KUNDU) DYNASTY.

1239? Chu-kapha, became independent, and spread conquests, surname Assma (unequalled), whence Assam.

1268 Chu-toupha, son, defeated the Rāja of Cachir.

1281 Chu-hengpha.

1293 Chu-kangpha.

1332 Chu-khampha, valley invaded by Muhammad Shāh, 1337.

1364-9 Interregnum of five years; when the ministers installed

1369 Chu-toupha, a relation, conquered Chhutiyau.

1372 Chu-khamsthepa, a tyrant, killed by his ministers.

1405-14 Interregnum of nine years.

1414 Chu-dangpha, conquered as far as the river Kuratoya.

1425 Chu-jangpha, his son.

1440 Chu-phāpha, ditto.

1458 Chu-singpha, ditto.

1485 Chu-hangpha, ditto.

1491 Chu-simpha, a tyrant, put to death.

1497 Interregnum, and Humāi Shāh's invasion, 1498.

1506 Chu-hampha, a brother, various conquests.

1549 Chu-khuapha, his son, built Gurgram.

1563 Chu-khranpha.

1616 Chu-chāpha; introduced reforms; protected Dharmanāraia.

1640 Chu-rūmpha, a tyrant, dethroned.

1643 Chu-chāpha.<sup>1</sup>

1647 Kaku-rāihora Gobani, dethroned for his brother.

1665? Chukum, or Jayadhwaja Sinha, adopted Hindu faith; defeated Anrangzib's general?

1621\* Chakradhwaja (or Brijā) Sinha, built fort of Gohāti; (Sāmagrya deva, M. C.); repulsed Anrangzib's general? called Chukum.

1665 Kodayaditya Sinha, attempted to convert the people.

1677 Parbatia Kunria.

1681 Lorarkia, for some reigns confusion prevailed until

1683\* Gadādhara Sinha; his son Kama set aside.

<sup>1</sup> A.D. 1570, A.D. 1648—*Sceeryamerdyon*, also called Pretāpa Shāh, the Hindu name of *Chāsiangpha*—(Jenkins); he was of the Dehingia family, who took the name of Narsin; the other branch, Toughment, took the title of Sinha.—J. P.

- 1689-1713\* Rudra Sinha, built Rangpur and Jorhat; his coins first bear Bengali inscriptions.  
 1715-21\* Siva Sinha, established Hindu festivals.  
 1723-26\* Phulsawari, his wife, acquires sovereign rule.  
 1729-30\* Pramatheswari devi, ditto.  
 1732-38\* Amhika devi, ditto.  
 1738-43\* Sarveswari devi, ditto.  
 1744\* Pramatha Sinha, made equitable land settlement.  
 1751\* Rajeswara Sinha, embellished Rangpur, allied with Manipur.  
 1771\* Lakshmi Sinha Narendra, younger son, raised and deposed by minister.  
 1779\* Gourinatha Sinha, his son.  
 1792\* Bharata Sinha Mahamari, conquers Rangpur, and  
 1793\* Sarvkantha Sinha, usurps power at Deismara.  
 1796\* Bharata Sinha again attempts, but is killed.  
 Gourinatha Sinha, restored by British; died at Jorhat.  
 1808\* Kanuleswara Sinha, or Kinnaraka, not crowned.  
 Raja Chandrakanta Sinha Narendra, fled to Ava.  
 Parandhar Sinha, great grandson of Rajeswara Sinha, expelled by Burmese,  
 and  
 Chandrakanta, restored, but deposed again, and  
 Yogeswar Sinha, raised by Assamese wife of an Ava monarch, under  
 Mengki Maha Theinah, the Burmese general and real governor.  
 1824 Burmese expelled by English.
- 1712\* Date of Manipuri square coins.  
 1763\* Persian coins of Raja Mir Siah of Rangpur.  
 1780\* Bengali coins of Jayantia Raja.

TABLE XXXIX.—*Rajas of Manipur, Mithil, or Mogli. From the Michouda or royal genealogical roll, Capt. Pemberton's MS.*

A.D.	Years.	A.D.	Years.
35 / Pakhangba, reigned.....	140	1200 Thawalthaba .....	30
174 Khol .....	99	1216 Chingthangthaba .....	11
264 Tanuthingmang .....	100	1247 Thing laisel kumba .....	6
364 Koming gualba .....	15	1253 Parakthaba .....	16
379 Penaba .....	15	1268 Khamomba .....	15
394 Kani khangba .....	15	1283 Moeramba .....	24
411 Nani khamba .....	47	1307 Thangthalthaba .....	22
429 Nani phamba .....	90	1329 Kongyamba .....	31
518 Samserang .....	50	1350 Telibaba .....	19
568 Koi Thucha .....	90	1399 Laimaba .....	5
663 Nanuthinghong .....	100	1403 Palaba .....	24
763 Khongtekcha .....	10	1437 Ninkhonthumba, reigned.....	35
784 Kacricha .....	15	1472 Koyamba .....	40
799 Yaba .....	22	1512 Kocremba .....	6
821 Ayangba .....	89	1517 Lamthangmaba .....	3
910 Ningloucheng .....	32	1520 Nongrithaba .....	9
949 Eipai lai Thaba .....	24	1529 Kaponba .....	17
973 Yanglao kai phamba .....	8	1546 Tangchomba .....	4
981 Eerengba .....	89	1550 Chailamba .....	17
1070 Lalayamba .....	55	1557 Monpyamba .....	35
1120 Loitongba .....	30	1572 Khakamba .....	65
1150 Monyoinaba .....	14	1577 Khulchouba .....	14
1170 Eirwalthaba .....	30	1571 Pakhomba .....	31

\* These dates are confirmed by coins in Marsden's Num. Or. and others in Captain Jenkins' collection.

A.D.	Years.	A.D.	Years.
1702	Charakirongba .....	1766	Gourva Shām .....
1714	Pamhaiba—Gharibnawā, or Garmānī Rāja, or Myang- gumba .....	1767	Jaya Sīnha .....
1753	Khakhlāichāba, or Oogai Shāh .....	1798	Robin chandra .....
1756	Mingthoōkhōmba — Bharat Shāh .....	1801	Moda chandra .....
1758	Gouri Shām—Maramba .....	1808	Charjit Sīnha .....
1764	Chingthangkhōmba, or Jaya Sīnha, Nongrangkhōmba., .....	1812	Maryit Sīnha, expelled by Barmas, 1819.
		1824	Gambhir Sīnha, brother, re- gained possession.
		1834	Kirti Sīnha, a minor, son of ditto.

TABLE XL.—*The Narapati, or Sholan Dynasty of Karnātā, Dravira, and the southern portion of the Peninsula. Twenty-seven Rājas, reigned 634 years.*

(Contemporary with the Gajapati and Aravati Dynasties; from a MS. translated by Buchanan.)

A.D.	Years.	Years.
260?	Utinga Sholan, reigned .....	Arjuna Cadamai Canda Sholan, reigned .....
	Culatunga Sholan .....	Jayam Canda Sholan .....
	Rājendra Sholan .....	Kiritai Canda Sholan .....
	Tiramadi Canda Sholan .....	Tundaman Sholan .....
	Carival Sholan .....	Buddham Cattam Sholan .....
	Arundavan Sholan .....	Shamman Sholan .....
	Vomayur Sholan .....	Ghingrai Canda Sholan .....
	Shayangura Sholan .....	Sandra Pandia Sholan .....
	Muralinda Sholan .....	Pottapa Sholan .....
	Mavacudi Canda Sholan .....	Shinga Yellanda Sholan .....
	Vakula Sholan .....	Dera Sholan .....
	Alaperiada Sholan .....	Shayanahatti Sholan .....
	Tiraveratu Sholan .....	Vira Sholan .....

800? Shayangura Sholan, 24 years; the MS. makes the final date A.D. 288. After the overthrow of the Narapati dynasty, Karnāta and Dravira seem to have been separated from the southern districts, in which the Chera, Chola, and Pandya lines were at first united under one sovereignty.

THIRTY-SEVEN MAHĀ RĀJAS OF MADURA, TANJORE, AND CHANNAYORE, REIGNED 332 YEARS.

Years.	A.D.	Years.
Udhamara, reigned .....	18	Sei Devanātha, reigned .....
Jaya deva .....	19	Mahā Arjuna .....
Lohita <sup>1</sup> .....	10	Adi Rām .....
Ganga dira .....	11	Mahā sutra .....
Vama deva .....	13	Vishvasvata .....
Terupulinda .....	34	Chandrabuti .....
Pattāvisan .....	43	

After which follow the Bēdal Rājas of the Karnāta, and the petty Poliygēṛ dynasties of Madura, etc.

<sup>1</sup> During this dynasty the palace of Madura is supposed to have been erected.

TABLE XII.—*Beldi Rajas of the Karnāta. Capital, Dhedrasamudra.*

'Nine Princes governed above the Ghāts 68 years, and afterwards below the Ghāts 111 years.'—(Buchanan, 'Mysore,' vol. iii. p. 112.)

MACKENZIE'S MS.		BUCHANAN, VOL. III. P. 474.	
A.D.		A.D.	Years.
984	Hayasaka Belāla rāja.		Rāja Belhā Rāja, reigned.... 18
1043	Vladitya Belāla.		Vira B. R. .... 11
1073	Yareyanga Belāla.		Chenna B. R. .... 22
1114	Vishya Varddhana Belāla.		Deva B. R. .... 14
1140	Vijaya Narasinha Belāla.	1015	Vishya verti B. R. .... 28
1189	Vira Belāla.		Hari B. R. .... 19
1223	Vira Narasinha deva.		Imadi B. R. .... 17
1249	Vira Someswara.		Vira B. R. .... 16
1268	Vira Narasinha, taken by the Muhammedans, and his capital destroyed in 1310-11.		Bawa B. R. .... 22
			China Bawa B. R. .... 8

## TABLE A.

[Mr. Walter Elliot, of the Madras Civil Service, some years ago (1836) contributed to the 'Jour. Roy. As. Soc.' an elaborate *résumé* of a series of no less than 596 Hindū inscriptions, collected chiefly in the Southern Mahratta country, or the district of Dharwa; in the western part of the Nizam's territories; in Mysore, the Mangalore collectorate, etc. In due preface to his table of results derived from these especially authentic documents, I prefix an outline of his supplementary remarks which more properly form an introduction to the inscribed genealogies of the leading race:—]

'This [the Chalukya] is the oldest race of which we find satisfactory mention made in the records of the Dekkan; they seem to have belonged to the great tribe that, under the general name of Harjāta, exercised dominion over the whole of the Northern and Central India. . . . The names anterior to Tailapa deva (Saka 896) are given on the faith of two inscriptions, which profess to be taken from older inscriptions on copper-plates than extant, supported by confirmatory evidence of a like nature. From these authorities we learn that Jaya Sinha claims to be descended from ancestors previously enjoying royal power, of whom 59 reigned in Ayodhya and other places in the North, or in Hindustan. . . . 10 are then described as reigning after him in the Dekkan. . . . but previous to them, two other families or races had possessed it, the Kartas and the Rattas, the latter of whom were overthrown by Jaya Sinha, who defeated and destroyed Krishna, the Ratta Rāja.'

- |                                                                        |                                                    |
|------------------------------------------------------------------------|----------------------------------------------------|
| 1. Jaya Sinha.                                                         | 7. Amers.                                          |
| 2. Rāja Sinha, <i>Rava Rajāha</i> .                                    | 8. Aditya varma.                                   |
| 3. Pulakesi (Saka 411) <sup>2</sup>                                    | 9. Vikramāditya (accession Saka 515).              |
| 4. Kirtthivarma.                                                       | 10. Vinayāditya, <i>Vidha Malla</i> .              |
| 5. Mangalika.                                                          | 11. Vijayāditya (accession Saka 617).              |
| 6. Satya Sri (eventually a family designation) son of No. 4, Saka 488. | 12. Vikramāditya (accession Saka 655) <sup>3</sup> |

<sup>1</sup> (1) At Ye-wr, in the Nizam's Territory, No. 4 of Vikram. II. (2) At Handurki in Tondur, No. 141 of Vikram II.

<sup>2</sup> See also 'Bombay Jour.' ii. 6; Pulakesi's father is also entitled Kirti Varma.

<sup>3</sup> See also Major Le-Grand Jacob's grant of this monarch, dated S. 627 (A.D. 705).

"No records have been obtained of any of the succeeding names in the list, till the time of Teila."

[Reverting to the original text, Mr. Elliot is found introducing his more especial series of documents in the following words:—]

<sup>1</sup> The inscriptions as arranged are found to relate to four dynasties of princes, reigning over the greater portion of that part of India now denominated the Dekkana, or Dekkan, but at that time Kuntala-deesa. The capital was first Kalyan (in the Muhammadan province of Kollarga), and subsequently Devagiri, now the modern city of Dowlatabad. The limits of this kingdom appear to have been the Narmada on the N.; the ocean on the W.; the line formed by the Kanarese language on the S.E.; and on the S.W. they would include the provinces of Naggar or Bidnur, and of Sonda. . . . The eastern boundary I have not been able to ascertain, but it is probable that it did not extend beyond the Ghâts, under which lay the kingdoms of Kalinga and Andhra.

## I.—CHALUKYA DYNASTY.

Name	Title	Accession Baka
1. Teilapa deva		896
2. Satya Sri, <sup>1</sup> or Irivi Bhujanga deva		919
3. Vikramaditya I. or Vibhva Vikram		930?
4. Jaya Sinha deva	Jagadeka Malla	940?
5. Someswara deva I.	(Tritlokya Malla Ahwa Malla)	963?
6. Someswara deva II. or Soyil or Sari-deva	Bhuvaka Malla	991?
7. Vikramaditya II. or Kali Vikram or Parmadi raya	Tribhuvana Malla	998
8. Someswara deva III.	Bhuvaka Malla	1040
9.	Jagadeka Malla	1060
10. Teilapa deva II. or Narmadi Teilap	Tritlokya Malla	1072
11. Someswara deva IV.	Tribhuvana Malla	1104

## II.—KALACHURIA OR KALACHURA DYNASTY.

12. Vijala deva or Bijala	Tribhuvana Malla	1078
13. Morari Savi deva, or Vira Vijala or Someswara deva	Bhuvaka Malla	1087
14. Sankama deva	Ahwa Malla	1096

## III.—YADAVA DYNASTY OF DWARA SAMUDRA.

15. Vira Bellala		1113
16. Nara Simha		?

## IV.—YADAVA DYNASTY OF DEVAGIRI.

17. 1. Ballam deva		1110
18. 2. Jayastuga deva	Jyoti dev	1116
19. 3. Simhana deva		1132
20. 4. Kandarac deva or Kanera deva		1170
21. 5. Mahā deva		1182
22. 6. Ramachandra		1193
23. 7. Shankar deva		1232

—<sup>1</sup>Jour. Roy. As. Soc., vol. iv. p. 4.

<sup>1</sup> Bombay Jour. iii. 263. The genealogy of the family is here somewhat differently stated: 3. Pulakesi; 4. Kirithivarma; 5. Satyavaraya; 6. Chandraditya; 7. Vikramaditya (brother of 6); 8. Vinayaditya; 9. Vijayaditya; 10. Vikramaditya.

<sup>2</sup> The Kharepatan inscription (Bombay Jour. i. 309) describes Satya Sri as reigning in the Baka year 930 (A.D. 1098). See also Major G. Le-Grand Jacob's Copper-plate Charters (Bombay Jour. iv. 97) dated S. 865 (A.D. 983).

TABLE B.

[I also annex Mr. Wathen's summary of the Chalukya dynasty of the South, the materials for which have also been derived from the authentic sources of inscribed copper-plate grants of land, etc. :—]

## THE CHALUKYA DYNASTY OF THE SOUTH (CAPITAL, GUATAPUR).

- |                                                                                                            |                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Jayasinha Vallabha I. <i>Jagadeśmalla</i> , (Saka 371? A.D. 430) 're-establishes' the Chalukya kingdom. | 15. Kōti-varma III.                                                                                                                                                                                                                                                                                                                              |
| 2. Rana-rāja (Saka 391? A.D. 470).                                                                         | 16. Apānāya (restores Chalukya power).                                                                                                                                                                                                                                                                                                           |
| 3. Pulakesi, <i>Satyavaraha</i> (Inscription 'Jour. Roy. As. Soc.' vol. v. p. 434) (Saka 411, A.D. 490).   | 17. Vikramāditya III. <i>Satyavaraha</i> .                                                                                                                                                                                                                                                                                                       |
| 4. Kōti-varma (conquered Nalabong or Bedar) 'conquest over the Maurya and Kaulamba princes.'               | 18. Tula-bhūpa II. (conquers 'Bhadrakōṭa Rājās of Hanakambha (Chandail, in Berar) and Karkara').                                                                                                                                                                                                                                                 |
| 5. Mangalika, <i>Satyavaraha</i> .                                                                         | 19. Satyavaraha.                                                                                                                                                                                                                                                                                                                                 |
| 6. Narasimha.                                                                                              | 20. Jayasinha II. (?)                                                                                                                                                                                                                                                                                                                            |
| 7. Aditya varma.                                                                                           | 21. Dasa-varma.                                                                                                                                                                                                                                                                                                                                  |
| 8. Vikramāditya I.                                                                                         | 22. Jagadeśmalla, (?)                                                                                                                                                                                                                                                                                                                            |
| 9. Yādha-malla.                                                                                            | 23. Jayasinha III. entitled <i>Sri-Prithivi, Vallabha Mahārājadhīrāja, Paramanand, Parama-bhadrakā, Satyavaraha</i> , etc., conquers Pancha-drūmīla-nagara, the capital of the Chola king, and seizes the dominions of the seven Rājās of the Kōṭakana.—Inscription dated Saka 946, A.D. 1025 ('Jour. Roy. As. Soc.' vol. II. 280). <sup>1</sup> |
| 10. Vijayāditya.                                                                                           |                                                                                                                                                                                                                                                                                                                                                  |
| 11. Vikramāditya II.                                                                                       |                                                                                                                                                                                                                                                                                                                                                  |
| 12. Kōti-varma II.                                                                                         |                                                                                                                                                                                                                                                                                                                                                  |
| 13. Tula-bhūpati (Revolutions, etc.). <sup>2</sup>                                                         |                                                                                                                                                                                                                                                                                                                                                  |
| 14. Dhima.                                                                                                 |                                                                                                                                                                                                                                                                                                                                                  |

[Mr. Wathen's other grants may be briefly recapitulated as follows :]

1. Saka 894, A.D. 973. Kakka or Kakkala rāja entitled Amoghavarsha; capital Maskhara in the Hyderabad country. See also 'Bombay Jour.' vol. I. p. 211, grant dated Saka 939.
2. and 4. Saka 945 and 980.<sup>3</sup> Sākā, Sōytra, or Sōbhāra family present a series of eight or nine princes commencing with Kapsad (circa 900) who claim to rule over the Kōṭakana.
5. Saka 1103. Sri Mata-Aparāditya-Rāja. Kōṭakana.
7. Saka 1127. Five local Sākā rājās enumerated.
8. Saka 1182. Grant by a minister of a king of the Chalukya race.
- 9, 10. Saka 1212 and 1194. Yādava family, under Rāma Chandra Deva of Devkravati.

TABLE XLII.—*Adera Rājās of Tuluva, Andhra, or Telingāna. Capital Warangalli or Warangol.*

Nineteen Adera Rājās reigned 370 years (211 years?) supposed to be the eighteen princes of Andhra descent, prior to Prithvī Rudra.<sup>4</sup>

Trishnaveema Malla Rāja, of Warangol.

- |       |      |                                                                                                                                |
|-------|------|--------------------------------------------------------------------------------------------------------------------------------|
| A.D.  | A.D. | Prithvī Rudra built a temple.                                                                                                  |
| 1084. | 1162 | East boundary the washore, Sri Sāṅga hills (South of Hyderabad); West, Vakataka country; North, Mountains N. of Godavery.—J.P. |

<sup>1</sup> [See grant of Govinda Rāja Bhadrakōṭa, dated Saka 730, A.D. 808. 'Jour. Roy. As. Soc.' vol. v. p. 360, and the still earlier document of Danti Durga, Saka 675, A.D. 733.] <sup>2</sup> [See also Mackenzie collection, introduction, civ.]

<sup>3</sup> [Also Saka 939. 'As. Res.' vol. I; and Saka 1112. 'Trans. Lit. Soc. Bombay,' vol. III.] <sup>4</sup> Sāmanam from a temple at Warangol.





Kongani Mahādhirāja.	Malla deva.
Goviṇḍa III.	Gaṇḍa deva.
Siraga.	A.D. Satya vrīkṣa deva.
Prithivī Kongani Mahādhirāja.	894 Gaṇṭama deva, subdued by the
Rāja deva.	

Chola Rāja, from whose descendants it passed to the Belli Rājas of Maṣur, and thence to the Vijayanagar dominion.

## [KARUNDA TAMBA-PATRA.

Dated Śāka 734—812 A.D. 'Jour. As. Soc. Beng.' vol. viii., p. 292.  
(Lāṭeywara' kingdom; capital, Elapur.)

1 Goviṇḍa Rāja.	5 Goviṇḍa II.
2 Karka.	6 Indra.
3 Kriṣṇa.	7 Karka.]
4 Dhruva.	

TABLE XLV.—*Pandya Dynasty of Mādura.*

Tradition preserves seventy-four princes, of whom thirty-nine names are extant.

Kulottunga, 2000 B.C.†	Ujaina.
Anantaguna.	Rāja Charamani.
Kālabhāṣana.	Rāja Śārdūla.
Rājendra Pandya.	Kulottunga.
Rajowara.	Yodhana pravira.
Gambhira.	Rāja Kōṣṭha.
Vaṇaspradīpa.	Rāja Bhāyankara.
Purubhatajī.	Ugrasena.
Pandya Vamsapātaka.	Mahāsena.
Sundarasena.	Satranajaya.
Padmasakha.	Bhimsaraha.
Vasuguna, united Chola and	Bhimsarākruma.
Tonda to Mādura.	Pastapa Mārtanda.
Rājendra.	Vikrama Kuṇjaka.
Śuguna.	Yodha Kōṭṭha.
Chitrastha.	Atala Vikrama.
Chitrabhadra.	Atala Kirti.
Chitra dāvaja.	Kirtivibhāṣana.
Chitra varma.	Vasumakha, founded the Ma-
Chitraena.	dura College.
Chitravikrama.	Vasumakhamani.

Nāyaka Dynasty—founded by Nāgama Nāyaka, an officer of Krishna Rāja of Vijayanagar, fourteen princes.

1530 Virwanātha.	Chokanātha; died 1687.
Krishnappa.	1687 Krishna muta Virapa.
Virapa.	1696 Vijaya ranga, under regency
Vivapa.	of Mangamāl.
Kumara Krishnappa.	1731 Vijaya Kumara, do. of Minakshi
Kasturi Rājappa.	rani. Fort seized by Mu-
Muta Krishnappa.	hammad, and Mādura be-
Virapa; died 1623.	came tributary to Nawāh of
1623 Terumala, or Trimal, 1663.	Carnate, and afterwards to
1663 Muta virapa.	the British.

† Supposed to be Kongades by Mr. H. T. Prinsep. See also Wilson's Mackenzie MS., p. 198.

TABLE XLVI.—*Rajas of Vijayanagar.*

From history, inscriptions, and family genealogy, (see 'As. Res.', vol. 12.) The latter authority, in the usual manner, deduces a direct line from Pandu, of the lunar dynasty, imperfectly following the Puranic lists to Chandrabaja, the last of the Magadha rajas; to whom succeeds,

A.D.		A.D.	
	Maru.	1490	Vira narasimha raja.
	Nanda.		Achryuta rao.
	Bhutanandi.	1524	Krishna deva; extended his sway to Gujerat, etc.
	Nandili, who has two sons, Ses-		Rama Raja, killed in invasion of
	humandi and		Nizam Shik, and I'mad ul
	Yashanandi, whose fourteen sons,		mulk.
	ruling over Bybendish, are dis-	1555	Sri Ranga Raja.
	persed by two invaders, Amitra		Trimala Raja.
	and Damsitra; and seven fled		Vira yangut pati.
	to Andhradma, or Telingana,		Sri Ranga II.
	where		Ramesdeva rao.
1034	Nanda, maharaja, erected a king-		Venkatapati rao.
	dom, and founded Nandapur		Trimala rao.
	and Warangol.		Ramesdeva rao.
1076	Chalik Raja.		Sri Ranga rao.
1115	Vijaya Raja; founded Vijayana-		Venkatapati; invaded by the
	gar.		Moghols and fled to Chandra-
1153	Vimala rao.		girl.
1182	Narasimha deva.		Rama rao; recovered a portion
1249	Rama deva.		of territory.
1274	Bhupa raya, died without issue.	1603	Hari Das.
1334	Bukka, son of a neighbouring	1704	Chak Das, his brother.
	Raja, raised to the throne of	1721	Chinna Das.
	the Dakshin by Vidyaranya,	1734	Rama raya.
	his guru.		Gopala rao, son of Chak Das.
1367	Harihara rao.	1741	Yankatapati.
1391	Deva rao.	1756	Trimala rao.
1414	Vijaya rao.		Sultan Khan took the country
1424	Pundara deva rao, deposed by		in the name of Tipu; and
	Sri Ranga Raja of Kalandrug.		with Vira Venkatapati Rama
1450	Rama chandra rao, son of Sri		raya, the dynasty became ex-
	Ranga.		tinct, A.D. 1829.
1473	Narasimha rao.		

TABLE XLVII.—*Rajas of Mysur (Makshur or Mysore.)*

Their genealogy is traced from the Yada line of Chandravarha.—Mackenzie MSS.

A.D.	
	Betta Vadiyar.
	Chamaraja Vadiyar, son of Yada.
1530	Timmaraja Vadiyar, son of Betta.
	Hirya Chamarasa Vadiyar, his son.
	Bettatha Chamarasa Vadiyar, do., who had three sons,
	1 Timmaraja Vadiyar.
	2 Krishnaraja Vadiyar.
	3 Beta Chamarasa Vadiyar; had two wives, Viryamata and Demayamata.
1606	Raja Vadiya, son of the former, took Seringapatam, 1610.
	Bettada Chamarasa Vadiyar.
	Devappa raja Vadiyar, } sons of Demayamata.
	Chama raja Vadiyar, }

- Narasu rāja Vadiyar, son of first wife of Rāja Vadiyar.  
 Chamaraja Vadiyar, his son.  
 Imali Rāja Vadiyar, son of Rāja Vadiyar's second wife.
- 1638 Kanthirao Naru rāja Vadiyar, son of Bettada, acquired great power.  
 [Chimrayapattan inscrip. Benc. Mysore.]
- 1659 Dada Deva rāja Vadiyar, son of Devappa, extended dominion N.W.  
 Chikka Deva rāja Vadiyar, his son, collected family history.
- 1704 Kanthirao Naru rāja Vadiyar, his son.
- 1713 Krishna rāja Vadiyar, do.  
 Chamaraja Vadiyar.  
 Imali Krishna rāja, son of Krishna.  
 Nanja rāja Vadiyar, his son.  
 Chamaraja Vadiyar, dethroned by Hyder Ali; Mysore destroyed.
- 1796 Krishna rāja Vadiyar, restored by the British.

TABLE XLVIII.—*Paligar Dynasty of Trichinapali.*

Terumala Raya, of Achita tribe, in Trichinapali, founded dynasty.	Kikkaiyetti.
Panchakkhyas.	Tondaka Nripati.
Tondaka.	Terumala Bhopa.
Naraina Chokkellipa.	Padmapa.
Terumala Nripalachandea.	Raghunatha, an officer of Vijaya Raghava,
Narasuri.	of Tanjore.
Pachanara pala.	Terumala raya.
Namuna.	Sri Vijaya Raghunatha, conquered Chon-
Pachamahlan.	da Kkhu.

TABLE XLIX.—*Palaguti Rajas of Vankatagiri, or Kālimālī.*

From the Mackenzie MSS.

Pāṭalmari vettā.	Nirvan ray appa.
Damasaidu, aided in giving Prithva	Kumara tressa naidu.
Rudra the throne of Warangal.	Padakonda naidu.
Vanammasidu.	Padakonda naidu II.
Yandakchansaidu.	Chennapa naidu.
Sinha mansidu.	Vankatadri naidu; whence name
Madan.	of place.
Vedagiri naidu.	Rayappa.
Kumar madan.	Pennakondapa naidu.
Sinhao naidu.	Yachama.
Pada sinham.	A. D. Kueturi.
Chenna sinham.	1690 Yacham naidu, conquered as far
Anupota; extended sway to Krishna river.	as the Madura province.
Sarva sinh.	Padayachem.
Dharmansaidu.	Kumar yachem.
Tinmansaidu.	Bengar yachem; murdered A. D.
Chiti daksha.	1696, by Zulfikarkhan.
Anupota.	Kumar yachem; died 1747.
Madan.	Bengar yachem, and
Sura.	Padayachem, 1778.
Yachamanaidu; founded Valaguti branch.	1804 Kumar yachem, adopted.
Chenna Sinh, under Vijayanagar.	Bengar yachem; ditto.

TABLE L.—*Indian Dynasties, according to Ferishtah, stated to be taken from Persian and Sanscrit authorities.*

[The subjoined list seems to have been compiled by Prinsep from Dow's translation of Ferishtah ('History of Hindūstān,' London, 1812), whose work, often most meritoriously exact in its rendering of the original, is at times quaintly interpolated with observations, which, though appearing by the context as Ferishtah's, are in effect not to be found in his proper Persian version: under this category may be classed the dates pertaining to the ante-Muhammadan section of the Table under review. Dow's translation of this portion of the entire history labours under the additional disadvantage of having been based upon manifestly imperfect MSS., which are now susceptible of correction and amplification from the excellent lithographed copy of the Persian text published at Bombay. I have introduced a few emendations and additions from that source; but in the process of the examination necessary to this end, I have been led to form a somewhat unfavourable impression of Ferishtah's knowledge, and his power or will to sift and elucidate the traditions he inserts regarding the early dynasties of India. I am fully prepared, however, to admit that there is much curious matter to be found in his introductory chapter, which, if we could but rely upon our authority or trace up his sources of knowledge, would be well worth the deliberate scrutiny of orientalists. I intentionally abstain from entering more fully into this subject, as I am aware that the late Sir H. M. Elliot has devoted much time and attention to the illustration of this fragmentary preface; and I trust that his observations on its merits may shortly see the light in the forthcoming posthumous edition of his works now under preparation by Mr. W. H. Merley.]

(This list is useful for comparison with those already inserted.)

Mahārāj; descended from Krishna (not the fabulous Brahmanical hero, but an ordinary mundane king of Hindūstān, reigning in Oudh).

B.C. Feridūn; first invasion of India, Málchand reigned in Málwa.

1429 Kavarāja, son of Mahārāj, invades Ceylon and reduces the Dakhan with the aid of Mumukshu, king of Persia.

Mandricha, built Manér.

1200 Peruz-nal, son of Kavarāja, recovers the provinces on the Indus previously ceded to Persia.

1072 Rustam of Persia establishes Sookja dynasty at Kansu, where worship of sun is introduced. (Dynasty survives 286 years?)

780 Barsja (36 years).

Kridar, a Brahman; tributary to Persia (19 years).

731 (died) Shunkal; built Laknauti (Gaur) in Bengal. Persian invasion under Fozarwulan, and subsequently by Afrash.

Rohata, son of Shunkal (dynasty reigns for 81 years after the death of Shunkal).

586 Mahārāj, Kachawa Rajputs of Amber established (reigns 40 years, contemporary with Gustap).

- 540 Keda rāja. Rustam Dista, the Persian Governor of the ceded Indian provinces being dead, Keda rāja reduces the countries on the Indus, and fixes his residence in the city of Herat; driven back by the Kābal mountaineers.
- 497 Jaya chand, his general—a famine.
- 437 Dāhlā, built Dīhlī.
- 397 Puras, of Kannauj, usurped throne of Kanauj.
- 359 Puras II.; resisted Alexander's invasion.
- 330 Sitasar-chand (Sandrocottus).
- 290 Jom. and his line, reigned tranquilly 90 years.
- 170 Kallān chand, a tyrant; kingdom of Kanauj dismembered.
- 55 Vikramajit (died), reigned in Malwa and Gujerāt; era established;<sup>1</sup> anarchy and confusion succeeded.
- A.D. Rāja Boga (Bhoja), of the Tīlar tribe.
- 330 Bauden (Vasudeva), revived Kanauj dynasty;<sup>2</sup> contemporary of Bahānagar, who married his daughter.
- 410 Rāndeo, of Bhatar race, fixed in Mārwar; tributary to Feris Sassan. Civil wars, took Kanauj and Bengal, married daughter of Sistray of Vijayanagar.
- 500 Pratah Chand, his general, of Seandis tribe, refused tribute to Nushirvan.
- Anand deva, reigned in Malwa, built Mandā and Ramgir (stated to be contemporary of Khosro Parviz).
- 550? Maldeo; assumed throne of Dīhlī, and Kanauj empire divided.\*
- Hūpāl, father of
- 977 Jaipāl, Rāja of Lāhor, invaded by Subuktigin and by Mahmūd.
- Anandpāl succeeds, defeated by Mahmūd.
- 1009 Bāhara (Vijaya var) of Bhattia, invaded by Mahmūd, A.D. 393.
- 1012 Prithivīpāl (Jaipāl II.) of Dīhlī and Lāhor, fled to Ajmir.
- 1010 Korra (Kuswar ray—Kusurapāl) king of Kanauj, surrendered to Mahmūd, in whose time the country was divided into principalities.
- Harset, rāja of Mērat.
- Chāndpāl or Chāhāndra, rāja of Mathura.
- Jusdray?—Sāda ray of Kalinjar.
- 1022 Juresima? rāja of Ajmir.
- 1024 Byramdeo (Brahma deva), of Gujerāt deposed; and Samnāth temple plundered.
- 1026 Dabhalimo (Sala deva) enthroned in his stead.
- 1035 Dāipāl, governor of Sonpat, forty miles from Dīhlī on road to Lāhor, in Sewālīk, Rām ray, another chief.
- 1043 Dāipāl, king of Dīhlī, with other rājas, retake Hansi, Tanesvar, etc., from Mahmūd Ghiznavi.
- 1118 Balin, of Lāhor; built Nāgor in Sewālīk, upset by Bairam Shāh.
- 1132 Pitter Rai of Ajmir, } defeated Muhammad Ghori.
- Chāndi (Chāwānd) Rai of Dīhlī }
- 1193 Hindū confederacy of 159 rājas defeated by ditto.
- Jay Chand, of Kanauj, defeated.
- Hemraj, of Ajmir, expelled Pithiray's son.
- Bhimdeva, of Gujerāt; Gorkhas noticed, under Muhammad.
- 1215 Sukir deva of Narvar (Patān) defeated by Mahmūd II.
- Uday-ra, tributary rāja of Jalwar.
- 1231 Rāja Dewbal, of Gwalior, reduced.
- 1240 Dīlkei and Mīlkei rājas, of Kalinjar.
- 1253 Dīrpāl, rāja of Sītmar, raised rebellion in Sind.

<sup>1</sup> [Dow's English text says, 'The Hindoos retain such a respect for the memory of Biker-Majit, that most of them to this day reckon their time from his death, which happened in the 89th year of the Christian era,' vol. i. p. 11. Ferishtah himself, in the Persian original, indicates this date as corresponding (at the time he was writing, A.D. 1615,) with the Hindū reckoning of 1663.]

<sup>2</sup> Wilford names this king Sadāpāla, or Sadārvipāla. 'As. Res.', vol. ix. p. 211.

<sup>3</sup> [See extracts from Al-Bīrdnī, vol. i., p. 314.]

- 1291 Rāja of Rāstnagar besieged by Feruz.  
 1294 Rāmdas, rāja of Deogarh (Daulatabād).  
 — Shantakides, his son, married Dewal devi, daughter of  
 Ray Karan, of Nehrwal, Gujarat; his wife, Kamla devi.  
 Bhima des, rāja of Rāmānābhor.  
 1299 Hambar des (Hamira), his son, besieged by A'la.  
 1304 Roka, rāja of Malwa, overthrown by Eln al-mulk.  
 1308 Nehr Des, of Jalwar, surrendered to ditto.  
 Ray Ratan Sen, of Chitor, escaped from A'la's camp.  
 — his nephew confirmed in that principality.  
 Sital des, rāja of Sewana.  
 1309 Laddar des, rāja of Warangal, made tributary.  
 Bilal des, of Karnata, resists Tughlak 1338, founds Vijayanagar.  
 1318 Harpal des, son-in-law of Rām des, stayed.  
 1340 Nag nak, Koli chief of Koudhana.—Prem Ray, of Gujarāt.  
 1347 Man des, rāja of Buglana.—Kriahna ray of Vijayanagar.  
 1389 Ray Sarvar, rāyrayan, of Bihar.—Vissak ray of Tellogana.  
 1391 Narvish Bhan of Gwalior, Raktor chief.—Narvish of Kehrta.  
 1402 Brahma des, son of ditto, expelled Dindar at Gwalior.  
 1405 Ray Davood, and Hubbon of Toodmha.  
 1425 Ray Bhaum of Jannu.—Deva ray, of Vijayanagar.  
 1446 Pustāh Singh of Patāla and Kampala. 1452 Narvish, his son.  
 1452 Prithviray and Karan ray.—Bhim ray of Condapilly.  
 1471 Amber ray and Mangal ray of Orissa, 1470.  
 1478 — Gwalior rāja resisted Lodi.  
 — Sangat Singh, expelled from Nāwa.—Siva ray of Vijayanagar.  
 1490 Mān Singh, of Gwalior, receives areas of honor.  
 1515 Vikramajit, his son, killed by Bihar, 1525, and Gwalior reduced after 100  
 years' independence.  
 1491 Saha des, rāja of Kakra.  
 1493 Balbhadr ray, of Kootumba, near Chunar. Narvish ray, his son.  
 Sulbhana, rāja of Pannā.  
 1501 Vissak des, of Bhodpore.  
 1528 Mān Singh, rāja of Gwalior.  
 1533 Rans Sanka, of Chitor (Sangrama Singh)—finally reduced by Akbar, 1570.  
 Rawal des of Bagur. Maday rāja of Chandory.  
 Manik chand and others killed.  
 1540 Maldeo, of Nagore and Ajmir, most powerful rāja.  
 1542 Harkrishna ray, of Retia—killed by Shīr Shāh.  
 1554 Ramchandra, rāja of Pannā and Kalisjar.  
 1556 Hemu usurps the throne of Dillī—battle of Panipat.  
 — Ram-Sa, a descendant of Mān Singh.  
 — Jagmal and Devt Dās, rājās of Marwar, yield to Akbar.  
 1567 Ujaya Sinha, of Udiyar.—Surjan ray of Rāmānābhor.  
 1570 Chandra Sen, son of Maldeo of Ajmir.  
 1573 Hāy Singh, appointed to Jodhpur by Akbar.  
 1580 — his daughter married to Selim Mirza.

TABLE II.—Maharatta Governments.<sup>1</sup>

## I.—FAMILY OF SIVAJI, RAJAS OF SATTARA.

- 1644 Shaji, a Subhādar of the Karnatic under Aurangzeb, bestows jagirs on his  
 sons.—Tanjore on Khoji—dies 1664.  
 1647 Sivaji, his son, commences predatory expeditions.  
 1664 — plunders Surat, and assumes title of rāja.

<sup>1</sup> The origin of Sivaji is traced in the chronicles of Mewar to Ajaya Singh rana of Chitor, 1300 (T. I. 289), thus: Ajayasi, Sujansi, Dulceoji, Seoji, Uhoraji, Deoraj, Oogursen, Mahalji, Khailoji, Jankoji, Sattsoji, Sambhaji, Sivaji, Sambhaji, Rāmraja, usurpation of the Peshwa.

- 1689 Sivaji establishes a military government—dies 1689, April.  
 1690 Rāja Rām, set up by minister—imprisoned at Raigadh.  
 — Sanibhaji, assumed the sovereignty—crowned at Talasur, August, 1689.  
 Santa, usurped power—murdered 1698.  
 1699 Rāja Rām, again proclaimed at Sattara, died 1700.  
 1700 Tārū Rāi, his wife, assumed regency—incurious into Behar.  
 1707 Sivaji II., son of Sambha, nicknamed *Shivaji*, released on Aurangzeb's death,  
 and crowned at Sattara, March 1708—poisoned.  
 1740 Rām Rām, nominal successor—power resting with minister of Peshwā.  
 1818 Peshwā Sivā, or Shih, re-instated at Sattara by British, April 11.

## II.—IMMEDIATE PESHWAS OF PŪNĀ.

- 1740 Bāhājī Bājī Rām, succeeds his father—dies after battle of Panipat.  
 1761 Madhaji Rao Bāhājī, second son, invested as nominal Peshwā, uncle Raghunāth, regent. Nāni Parnavis, his kinsman—dies November 1771.  
 1772 Narayan Rām, youngest son of Bāhājī, murdered.  
 — Raghunāth Rām (Raghobā), usurped.  
 1774 Madhavan Narayan, posthumous son of Narayan (Nani P. in power), commenced ascends 1795.  
 1796 Bājī Rām, proclaims himself: is taken to Sindia.  
 — Chintaji, fugitively invested at Poona, 26th May.  
 — Bājī Rām, publicly proclaimed, 16th December.  
 1818 ——— surrenders to and possessed by the English, 2d June.

## III.—PESHWAS KIN OF MADHVS.

- 1734 Raghaji Bhambā, nominated 'Sena Sahib Sahib' as general in Māharatta confederacy.  
 1750 ——— received award of *Bastar* from Peshwā, died 1752.  
 1763 Janaji, eldest son, adopted his nephew.  
 1772 Raghaji, eldest son of Madhaji, removed by Madhavan in favour of Sahaji (his uncle), killed in action soon after by Madaji.  
 1774 Sahaji (his uncle), killed in action soon after by Madaji.  
 1816 Parsaji, succeeded his father, Raghaji; as kin; strangled by Madaji (Appa Sahib), acknowledged by English; deposed 1817-18.  
 1818 May. Ghansar, grandson of Raghaji, seated on musnud by Brits.

## IV.—THE SINDIA FAMILY, FROM A VILLAGE NEAR SATARA, NOW GWALIOR RĀJAS.

- 1724 Ramaji Sindia, an officer in the Peshwā's army.  
 1760 Jyoti, succeeded to his father's jagir of half of Malwa, murdered 1769.  
 Dattaji, second son of Ramaji, engaged in the Panjab wars.  
 1769 Mahadevi, third, illegitimate, conferred in jagir by Madhavan, died 1794.  
 1794 Dadasaheb, his grand-nephew, adopted; fixed his camp at Gwalior, 1817.  
 1825 Bānā Bāi, his widow, adopted Jankaji, and acted as regent.  
 1833 Jankaji, assumed the reins of government.

## V.—THE HOLKAR FAMILY.

- 1724 Mulhar Rao Holkar, a Sindia, an officer of note in the Peshwā's army.  
 1750 ——— obtained jagir in Malwa, died 1767.  
 1767 Mālī Rao, grandson, succeeded under regency of Ahilya Bāi, his mother, but died soon after.  
 — Tukaji Holkar (no relation), appointed to command of troops.  
 1797 Jeevanant Rao Holkar, illegitimate son, maintained predatory rule.  
 1804 ——— conferred in jagir of Indore, &c., died insane.  
 1811 Tālū Bāi, widow, adopted his illegitimate child.  
 — Mulhar Rao Holkar; battle of Mahaspar, December, 1818.  
 1831 Mortant Rao, adopted son, deposed by  
 ——— Isari Holkar, present chief.

## VI.—GAIKWAR FAMILY—NOW RESIDING AT BARODA, GUJARAT.

- 1720 Damaji Gaikwar (Shameher Fehādar), officer under Khandi Rao Holkar.  
 1731 Pilaji Gaikwar, nominated Sena Khos Khos; murdered.



- 1732 Damuji, son, occupied east of Gujarât, died 1768.  
 1768 Govind Rao, second son, succeeded; but eldest, Syaji, an idiot, supported by  
 1771 Fatiâ Singh, youngest, who held real power at Baroda.  
 1790 Mannaji Rao, assumed charge of Syaji, as regent; died 1793.  
 1793 Govind Rao, made regent 19th December, died September, 1809.  
 1800 Ananda Rao, eldest son; disputes with Mulhar and Kanhoji.  
 1805 ——— Treaty with the British Government.  
 ——— Fatiâ Singh.

TABLE LII.—*Sikh Government of Lahore.*

- 1419 Nânak, founder of the Sikh sect, born.  
 ——— Guru Angad, wrote some of the sacred books.  
 1552 Amara das, Khatri.  
 1574 Râm das, twelfth-century Amritsar.  
 1681 Arjun Mal, compiled the 'Kâdi Granth'.  
 1696 Har Govind, first warlike leader.  
 1644 Har Ray, his grandson.  
 1661 Har Krishna, died at Dikh.  
 1664 Tegh Behadur, put to death by Mughals.  
 1675 Guru Govind, remodelled the Sikh Government.  
 1709 Banda, last of the succession of Gurus; put to death by Aurangzeb.  
 ——— Preliminary bands; internal feuds.  
 Twelve misls or tribes of Sikhs captured Lahore and occupied Panjâb.  
 Charat Singh, of Sukhsipka misl, died 1774.  
 1774 Maha Singh, his son, extended his rule; died 1793.  
 1792 ——— his wife, regent, with Lakpat Singh minister.  
 1805 Hanjit Singh (born 1786), established Lahore independency.

## BUDDHIST GENEALOGIES.

TABLE LIII.—*Chinese and Japanese Chronology.*

(From M. Klaproth's translation, Paris, 1833).

The Japanese names are distinguished by the letter J.

- |                                                                                                                                                                                                                                                                                                        |   |                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|----------------------------------------------------------------------------|
| <p>Ta chen wang.<br/>         I chu ma wang.<br/>         Yeou lo the wang.<br/>         Kio lo wang.<br/>         Ni foun lo wang.<br/>         Sun tou kie wang (Sana, Sishakim-kubina).<br/>         Tsing fan wang, Suddodana (and three brothers, Sana, Suklodana Amittadana, and Dhotodana).</p> | } | <p>Genealogy of Sâkya, according to the Buddhist works of the Chinese.</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|----------------------------------------------------------------------------|
- r.c. 1027 Si tho to, nan tho, Chykie (Sâkya muni), born.  
 999 Sâkya becomes eminent in eighth year of Ajatassara of Magadha.  
 949 Sâkya or Buddha (Fo), attains nirvana (dies).  
 868 Anan (Ananda), second patriarch, dies.  
 833 A ya wang (J., A ik ô) (Sana, Asoka), dies.  
 806 Changma ho sien, third patriarch, dies.  
 741 Yeou po kin to (J., Ou fa kik ta), fourth patriarch, dies.  
 692 Thi to kin (J., Dei ta ka), fifth patriarch, dies at Mathurâ.  
 687 Wang chu, disciple of Sâriputra.  
 660 Commencement of Japanese monarchy.  
 637 Mi chu kin (J., Mi sia ka), sixth patriarch of Magadha, dies.  
 604 Lao tan (J., Rô tan), founder of Tao tou sect in China, dies.  
 590 Pho sin mi (J., Fâ sin mi), seventh patriarch, dies in N. India.  
 551 Confucius, born in the kingdom of Lore.  
 550 500 arhats of Kashmir (ka sîts mi ra) preach the law.  
 535 Poe tho nan ti (J., Bouda da nan dai) eighth patriarch (Sana, Boudhâ-nandî) of Canara, dies.

- 487 Fou tho mi to (Sams., Buddhagāma), ninth patriarch, dies.  
 442 Hie, tenth patriarch of Central India, dies.  
 383 Fo na ye che, eleventh patriarch of Palibothra, dies.  
 327 Ma ming ta san, twelfth patriarch (Sams., Anurādhā) of Benares, dies.  
 264 Kia pi mo lo, thirteenth patriarch of West India, dies.

## COMMENCEMENT OF THE CHIN DYNASTY OF CHINA.

- 212 Loung chou, fourteenth patriarch of Central India, dies.  
 161 Kia na chi pho, fifteenth patriarch of West India.  
 130 Ko li men tho, makes an image of Mī lo in India.  
 112 Lo hui lo to, sixteenth patriarch of Kapila, dies.  
 74 Sang kia nan thi, seventeenth patriarch, born at Chi lo fa, dies.  
 13 Kia ye che to, of Ma ti, eighteenth patriarch, dies.  
 2 King hian fetches Buddhist scriptures from the kingdom of Yue ti.  
 A.D. 223 Kien mo lo to, of Fergāna, nineteenth patriarch, dies.  
 24-57 Hindūs carry Buddhist religion into Java.  
 65 Buddhism introduced at the Court of Ming ti, Emperor of China.  
 74 Tu ye to, twentieth patriarch of India, dies.  
 117 Pho sinou phau thau, twenty-first patriarch, dies.  
 166 Ma nan lo, of Nati, twenty-second patriarch, dies.  
 209 Ho lo na, of Fergāna, twenty-third patriarch, dies.  
 259 San tu pi khien, of Magadha, twenty-fourth patriarch, dies.  
 266-313 The 'Prājñā Pāramitā' translated into Chinese.  
 300 Wen lo tchou, of Khotan, translates the Fang k'uang king.  
 323 Pho che su to, of Ki pin or Chih, twenty-fifth patriarch, dies.  
 372 Introduction of Buddhism into Kauli (Cora).  
 382 Kien mo lo shy, settles in China and translates 'Mahā Prajñā.'  
 384 Introduction of Buddhism into Pe lei (in Cora).  
 388 Fou jou my to, twenty-sixth patriarch of India, dies.  
 399 Chy fa hian visits India to study.  
 407 Introduction of Buddhism into Tibet, under Hsiao to.  
 414 Chy fa hian returns to Chang an.  
 420 Death of Fou lo pho tho lo, of Kapila vishu, who translated the Houyen king in China.  
 457 Pan jo to lo (Prājñā dhara) of S. E. India, twenty-seventh patriarch, dies.  
 499 Fou thi ta na (Buddhi dhara), twenty-eighth patriarch of S. India, settles in China as first patriarch of that country, dies in 498.  
 500 Sang kia pho lo, of Fou nan, made chief of Chinese Buddhist temples by the Emperor Shun ren ti; dies in 525.  
 528 Introduction of Buddhism into Sia lo or Sinra (in Cora).  
 552 Ditto into Japan.  
 592 Death of Hwei kho ta su, second patriarch of China.  
 606 Seng lin ta su, third patriarch, dies.  
 622-645 Yuan huan, grandson of the Chhin family, travels in India and translates many books.  
 632 General introduction of Buddhism into Tibet, under Srong btsan gampo.  
 651 Death of Tao tin ta su, fourth patriarch of China.  
 675 Death of Houng jin ta su, fifth patriarch of China.  
 676 Ti pho ho lo, priest of Magadha, visits China and translates books.  
 699 Chy chha nio tho, of Chih, ditto, dies in 710.  
 713 Hwei neng ta su, last patriarch of China, dies.  
 732 Fou k'uang, a brahman sramana, visits China and translates the questions of Manju Sri (Kin kang ling king).  
 814 (about) Phan jo, priest of Chih, settles in China and translates the 'Houa yun king.'  
 854 Phan jo, made Fa pao ta su, grand master of the treasure of religion.

<sup>1</sup> The Chinese MS. of the 'Bibliothèque du Roi' ends here.—M. Klaproth derives the continuation from other Chinese and Japanese authors.

TABLE LIV.—*Buddhist Chronology of Tibet.*

From the 'Vaidūrya Kārpo,' written at Hlassa in the year A.D. 1686. Translated in Csoma's 'Tibetan Grammar,' p. 181.

n.c.	982	Birth of Śākya (Chomilāndia).
	882	The Kāla Chakra system taught by him; his death.
	881	The 'Mula Tantra' compiled at Shambhala.
	879	Death of Zhi tsang, king and author of ditto.
	878	Padma Sambhava born.
	838	Mañju Ghoṣa born in China.
	432	Nāgārjuna born.
	278	Ri-gs-den-grigs-pa, ascended the throne of Shambhala.
A.D.	252	Nyan-tsan, king of Tibet (Tharbari), died 271.
	618	Doctrine of 'endeavouring perfection' upheld.
	622	Nam-gyal, king of Shambhala; epoch of 493 years, called Mekha gya-tso, commenced.
	627	Srong-tsan gam-po born.
	629	Kang-cho, a Chinese princess, arrived in Tibet.
	651	Phrol-mang college, or Vihar, built at Lhasa.
	728	Khri srong, king of Tibet.
	747	Padma Sambhava arrived in Tibet; returned to India, 802.
	804	A new astronomical period commenced.
	861	Langtarma born; abolished Buddhism, 899.
	965	Kāla Chakra system introduced into India.
	971	Restoration of Buddhism.
	980	Atisha born.
	1002	Bron-ton, the teacher, born.
	1015	Soi-mag thang monastery founded.
	1024	Mekha gya-tso era terminated.
	1025	Kāla Chakra, or Javien cycle, established in Tibet.
	1038	Milarepa born.
	1052	Lang rithang pa born.
	1055	Ragrong college founded.
	1057	Lo-dang shenab, the translator.
	1071	Monasteries of Saṅgphu and Śākya founded.
	1077	Tagpo-lha-ja born.
	1079	Grathang monastery founded.
	1082	Ras-ehhung pa born.
	1090	Kun-gab-nying-pa, the great Śākya Lama born; died 1150.
	1108	Phag-mo-grub-pa born.
	1118	Period of 'deep meditation' commenced.
	1121	Yubrag pa born.
	1125	Śākya Set born.
	1134	Nyang, the prince, born.
	1166	The Tibet monastery founded.
	1173	The Tshai monastery founded.
	1177	The Bri-gung monastery founded.
	1178	The Stag-lung ditto.
	1189	The great Śākya paṇḍita born.
	1185	Gung-tang monastery founded.
	1202	Śākya Sri, of Kashmir, arrived in Tibet.
	1210	Tor-ton Lama born.
	1211	The Lang-tang monastery founded.
	1223	The Byang and Dor ditto.
	1233	Gro gun phagpa born, mastered Tibet 1251.
	1253	The Chhos-lung monastery founded.
	1286	Bu-ton born.
	1300	Ta-si-byang chhob-gyal tshan born.
	1347	Thag-chhen chhos gyal born; became Tati (king) 1347.
	1347	Thas-thang monastery founded.

- A.D. 1355 Incarnation of Tsang-khapa; died 1417.  
 1382 Tsang-tong-gyal-po born.  
 1389 Ga-dan-grub-po born.  
 1403 Shes-rah, the great interpreter, born.  
 1407 Yearly confession at Lhasa established by ditto.  
 1414 Karma pa born; Drua-pung Vihār founded.  
 1417 The Sera monastery founded.  
 1419 The Sang-mag-khar ditto.  
 1421 Dru-shah-hor-rang-gya-tso born.  
 1427 The Nor monastery founded by the Sa-kyas.  
 1429 Ge-legs pal-dan succeeded to the Gal-dan chair.  
 1433 The Nalanda monastery was founded.  
 1435 The Chah-do-byams-gling ditto.  
 1436 Zwa-lu-legs-pa succeeded at Gal-dan.  
 1437 The Pal-khor chaitya built.  
 1439 Lotawa chhos-kyang-rang-po born.  
 1445 The 'Pul-kur hai lung' work on Lavations, etc., written.  
 1447 The Bras-yul monastery founded.  
 1448 Logros succeeded at Gal-dan.  
 1461 Baso ditto.  
 1462 The Gong-kar Vihār founded.  
 1467 The Sze-dog-chen ditto.  
 1470 The Byams-gling ditto.  
 1471 Logros-tan-pa succeeded at Gal-dan; died 1473.  
 1474 Incarnation of Ol-chu gya-tso; died 1510.  
 1476 The Ta-nag thub stan-dzin gyal monastery founded.  
 1478 Mon-lam-pal succeeded at Gal-dan.  
 1500 Tshar chhen born.  
 1507 The Chhos-khor monastery founded.  
 1533 Khua grub pal gyi sengé born.  
 1541 Shod-nam gya-tso born; died 1586.  
 1575 ———— invited by Altun Khan, a Mongol prince.  
 1576 ———— built the Chhos-khor-ling monastery.  
 1587 Yon-tan gya-tso born; died 1614.  
 1615 Nag-rang lo rang gya-tso born.  
 1618 Period of 'morality' commences.  
 1625 Rig-dan sengé, succeeds at Gal-dan.  
 1630 Stan dain chhos gyal, king of Tibet.  
 1640 Nag-rang lo rang conquered whole of Tibet.  
 1643 ———— founded the Petals (redactors).  
 1650 ———— visited China.  
 1686 This Chronology compiled at Lhasa.

TABLE LV.—*Kings of Tibet, to the subdivision of the country in the tenth century.*

(From the *Depter nam po*, or ancient Records of Zhonau Pal, in Tsang, or middle Tibet; extracted and translated by M. A. Cooma Kierul.)

gNyah khri Stanpo.—(about two hundred and fifty years a.c.)	Grigam Stanpo.
Khri Stanpo.	Syodé gang rgyel.
hodié.	Habo legs.
Mukhri Stanpo.	Désho legs.
po.	Thim legs.
	Gura legs.
Dingkhri Stanpo.	SGrong chi legs.
So Khri Stanpo.	Iaho legs.
Mér khri Stanpo.	Zo nam za Né.
gDags khri Stanpo.	IDé Adal-nas gshung Mon.
Srits khri Stanpo.	Sé roel nam Né.

Sá rnoipo lde.  
 lDé rnoip nam.  
 lDé rnoipo.  
 lDé rgyelpo.  
 lDé Srin staan.  
 rGyel tori lung staan.  
 Khi staan, or Khi d'Uah.  
 dPung staan.  
 Khi thohi rjes grags staan.  
 Lha Thothori gNyan staan—(See hundred years after the first king), A.D. 407, see Chinese list.  
 Khi gNyan grags staan.  
 dGro gNyan hsem-bu.  
 Stagri gNyan galga.  
 gNam ri arung staan.  
 Brong staan agampo—born A.D. 677.  
 Gung arung gung staan—(died before his father).  
 Mang arung mang staan—(son of Brong staan, etc.)

ADua sang mangpo rjé.  
 Flang nam farunggi rgyelpo.  
 Khi lde gtang artan mäs ut' hoga.  
 Khi arung lde staan—(born A.D. 726.)  
 Munté staanpo.  
 Khi lde arung staan (or Mutig staanpo.)  
 Balpa chen.  
 Khi huan staan d'pal (or d'Langlar ma ?) A.D. 900.  
 gNam lde bod arung—(in the 10th century; anarchy.)  
 dPal Akher staan—(division of Tibet into several small principalities.)  
 dKra chis d'rtsegs d'pal.  
 dKyid lde Nyim arung.  
 dPalgyi arung—(occupied Maryul or Ladage.)  
 dKrahis lde arung—(took possession of Spurenga.)  
 lDé gtang arung.

Then follow the names of some kings or princes who reigned in Ongé and Spurenga (or, in general, in Nari), above Garhwal and Kamaon, commencing with the tenth century. At Lé in Ladage may be found the names of the kings that successively reigned in that principality; but I could not procure them. There is great confusion in the series of the princes that reigned in Nari, and their enumeration would be of little interest. There are in Tibet several works containing lists of the descendants of Nyä khi tsampo, the first king, whom they derive from the Litsayri race, in India; but in different authors the orthography sometimes varies, and even the whole name is differently stated. This, which I now communicate, has been taken from the *Dup-ter-hou-po*, 'Ancient records,' written by Zhomsu phi, a learned religious person, who lived some centuries ago, and belonged to the *Sa-ekyn* religious sect, in gTsang, in Middle Tibet.—A. G.

TABLE LVI.—*Burmese Chronological Table, translated in Crawford's Embassy.*

B.C.	A.D.	
691		The grand epoch established by An-ja-ma, the grandfathers of Gautama.
628		Gautama born.
608		Gautama began to reign.
589		Gautama obtained delivration (became a Buddha).
561		Ajatasat began to reign.
544		Gautama died and obtained nih-b'han (annihilation).
543	1	The sacred epoch established by king Ajatasat.
520	24	His son, U-da-ya-hat-da, began to reign.
496	48	His son, Muny-da, and after him, his son, Na-go-da-na.
485	59	Maha Sam-b'ha-wa.
478	66	His younger brother, Chols Sam-b'ha-wa, began to reign.
472	72	Su-se-na-ga, in Maj-jí-ma (Central India).
463	81	His son, Ka-la-san-ka, in Maj-jí-ma.
443	101	Twat-ta-puang, the founder of Sa-re-b'hat-ta-tó (or Rao-ne Myo, vulgarly called Prama).
426	118	His son, Bat-la-se-na, in Maj-jí-ma.
404	140	Nun-da began to reign, and was followed by eight kings of the same name, in Maj-jí-ma.
392	162	Chan-ta-kut-ta, in Maj-jí-ma (Chandragupta).

B.C.	A.D.	
376	168	His son, Rin-ta-sa-ra, in Maj-jī-ma.
373	171	His son, Twai-ta-rum, in Prome.
361	193	His son, Ram-b'haung, in Prome.
336	214	His son, D'ham-ma-sa-sa-ka, in Maj-jī-ma.
326	218	D'ham-ma-sa-sa-ka received the sacred affusion (Ab'hi-se-sa).
320	224	Prince Ma-hin-d'ha became a priest (Rahan), and his sister, Princess San-g'ha-nit-ta, a priestess (Rahan).
307	237	The period of the third rehearsal of the communications of Gautama. The priest Ma-hin-d'ha went on a religious mission to Si-ha (Ceylon).
301	243	Ra-han-man, son of D'ham-ma-sa-sa-ka, began to reign in Prome.
269	255	Death of D'ham-ma-sa-sa-ka (literally, 'his going to heaven').
251	283	His son or grandson, Kak-k'han, began to reign in Prome.
219	325	His son, Khan-laung, in Prome.
183	362	His son, Lok-k'haung, in Prome.
148	396	His son, Si-k'han, in Prome.
118	426	His son, Si-ti-rak, in Prome.
111	436	Ta-pa-mang, in Prome.
94	450	The communications of Gautama reduced to writing in Ceylon.
80	464	Ta-pa-man's son, Pi-rum, in Prome.
32	503	Ram-mak-k'ha in Prome, and his son.
A.D.		
21	566	Ram-sa-ga, in Prome, and his son.
54	568	His son, Ram-mun-sa-ka-da, in Prome.
39	583	His brother, Ho-rin-da, in Prome.
54	598	His son, Mun-ja, in Prome.
80	600	His son, Pa-nyan-nya, in Prome.
89	603	His brother, Sa-k'ha, in Prome.
62	606	Sa-k'hi, in Prome.
60	609	His younger brother, Kan-sa, in Prome.
60	610	His elder brother, Kan-tak, in Prome.
60	613	His elder brother, Bin-ja, in Prome.
73	617	His son, Sa-mun-dri, in Prome.
76	1	The Prome epoch, established by king Sa-mun-dri.
80	2	His son, Ati-ta, in Prome.
83	5	His brother, Su-panya-na-ga-ra-chin-na, in Prome.
94	16	Death of King Su-panya-na-ga-ra-chin-na.
107	29	Sa-mud-da-raj began to reign in Pagan.
102	74	Ra-ue-kyang, in Pagan.
167	89	Fara-chau-ti, in Pagan.
242	164	His son, Thimany-rany, in Pagan.
290	221	His son, Sang-mang-pok, in Pagan.
324	246	His son, Pok-ma-lary, in Pagan.
386	308	Bud-d'ha-ga-sa went to Ceylon.
387	309	Pok-sang-lany's son, Kyang-da-rak, began to reign.
413	334	His son, Sany-t'han.
469	391	Mut-k'ha-man and So-rai.
494	416	Sany-t'han's great grandson, Ra-nwan-nya.
516	438	Sok-ton.
523	445	His son, Sang-lang-kyang-ngai.
532	454	His brother, Sang-lang-pok.
547	469	His brother, K'han-laung.
557	479	His brother, K'han-lap.
569	491	His son, Thwan-t'ho-k.
582	504	His son, Thwan-prak.
498	520	His son, Thwan-kyach.
613	535	Pap-pa-chau-ra-han.
639	1	The present vulgar epoch established by Pap-pa-chau-ra-han.
640	2	His son-in-law, Shwa-bun-ti, succeeded.
652	14	His brother, Pa-sun.

A.D.	V.S.	
660	22	His son, Pit-tang.
710	72	His brother, Na-k' hwe.
716	78	Myang-ka-kywe.
726	88	Sing-ga.
734	96	Sing-k' hwan.
744	106	His son, Shwe-luang.
753	115	His son, Tho-wan-twang.
762	124	His son, Shwe-mauk.
766	128	His son, Chan-k'hang-nach.
785	147	His brother, Thwan-lwat.
829	191	His son, K'hai-lu.
846	208	His brother, Pyany-bya.
864	226	His son, Tan-nak.
889	251	His son, and his brother, Cha-le-nga-kwe.
914	276	His son, Sing-g'ho.
930	292	Taung-an-kri (the mountain chief)
945	307	Kwan-chau Kraung-pu.
966	328	His son, Kraung-cho.
973	334	His brother, Chack-ka-té.
997	359	Kraung-p'ham's son Nau-ra-t'ha-chau.
1030	392	His son, Chan-in.
1056	418	Kyan-chack-su.
1081	443	His grandson, Alou-chany-su.
1101	463	His son, Ku-le-kye.
1154	516	His son, Mang-ra-na-ra-sung-ga.
1157	519	His brother, Na-ra-pa-ti-chany-su.
1190	552	His son, Ja-pa-sing-ga, or Nan-tang-nyo-mang.
1213	574	His son, Kyu-chwa.
1227	589	His son, Uch-cha-na.
1233	595	His brother, Mang-k'hen-k'kye.
1277	639	His son, Kyany-chwa.
1291	653	His son, Chao-nach.
1300	662	Ta-chi-shang-ai-ha-su, in Panya.
1313	675	His son, Chan-mwan-nach, in Panya.
1322	684	His son, Uch-cha-na. This year Aung-k'ha-ra-cha-rwan founded Chit-kaing, and began to reign.
1330	692	His elder brother, Ta-ra-bya-kri, in Chit-kaing Sakking.
1342	704	His younger brother, Na-chi-shang-kyany-chwa, in Chit-kaing.
1351	713	His son, Kyany-chwa, in Chit-kaing.
1356	718	Chan-mwan-nach died, and Pagan was destroyed.
1362	723	Kyany-chwa's brother, Mau-pa-na-ra-su, in Chit-kaing.
1364	726	His elder brother, Uch-cha-na-prung, in Chit-kaing. This year Sa-to-mang-bya founded Aungmye (Ava), and began to reign; Chit-kaing and Panya were destroyed.
1377	739	His father-in-law, Many-kri-chwa, in Ava.
1401	763	His son, Ta-ra-bya-kri, in Ava, succeeded the same year by Mang-kaung the First.
1422	784	His son, Chany-pu-shang-ai-ha-su, in Ava.
1425	787	His son, Many-t'ha-gray, in Ava, succeeded the same year by Ka-la-kyo-nga.
1426	788	Mo-n'hany-mang-ta-ra, in Ava.
1439	801	His son, Mang-rai-kyany-chwa, in Ava.
1442	804	His brother, Na-ra-pa-ti-kri, in Ava.
1468	830	His son, Mang-k'hang the Second, in Ava.
1501	863	His son, Shwe-nan-kyany-shang, in Ava (proper name, Na-ra-pa-ti.)
1526	888	Mo-n'hany-so-hau-pwa, in Ava.
1541	903	Un-b'hang-cha-b' hwa, in Ava.
1546	908	His son, Mo-bya-na-ra-pa-ti, in Ava.
1551	913	Cha-kong-chany-su-kyany-taung, or Na-ra-pa-ti-gu, in Ava.
1554	916	Sa-to-mang-chau, in Ava.



A.D.	B.C.	
1665	927	Prany-chun-mung-roi-kyany-chwa, in Ava.
1697	959	Nyang-rum-man-kri, in Ava.
1696	967	His son, Anauk-pat-ivan-mang-ta-ra-kri, in Ava.
1629	990	Sa-ivan in Ava.
1648	1010	His son, Na-dat-da-ya-ka, in Ava.
1661	1023	His brother, Prung-mang, in Ava.
1672	1034	His son, Na-ra-wara, in Ava; succeeded the same year Mang-rui-kyany-lang, grandson of Sa-ivan.
1698	1060	His son, Man-mung-ra-da-aga-da-ya-ka, in Ava.
1714	1076	His son, Chang-p'ku-shung, in Ava.
1733	1095	His son, K'haung-thit, carried captive to Han-ra-wati.
1752	1114	Alaung-b'ho-ra (Alompra) began to reign at Mui-cho-ho (Mandabo).
1759	1121	His son, U-pa-ra-ja, at Chit-kaing.
1768	1125	His brother, Chan-y-p'ku-shang (Sumbawa), at Ava.
1776	1138	His son, Chan-ku-cha, at Ava.
1791	1143	His cousin, Pang-ku-cha, commonly called Mung-mang, son of U-pa-ra-ja, at Ava; succeeded the same year by his uncle, Pa-dun-mang, or Man-ta-ra-kri, son of Alaung-b'ho-ra, and founder of A-ma-ra-pu-ra.
1812	1161	His present Majesty, grandson of Pa-dun-mang, ascended the throne at A-ma-ra-pu-ra.
1822	1184	Ava rebuilt, and made the capital.

TABLE LVII.—*Chiefs of Labang and Zimway.*—(Northern Laos of Europeans; Yuen Shan of the Burmese.)

From the Native Records consulted by Dr. D. Richardson, 1834. MS.

A.D.	B.C.	Bad.
576	1115	Wathaw daywa (Vasubhava) and Taka danda, founded Labang.
578	1120	Placed Yamé on the throne (see Zamma deri), daughter of the king of Choudapuri, widow of Cambodia raja. 35 Kings, or ' Lords of the White Elephant.' Aditra-ween-tha built the Pagoda. 19 kings to
		Banya men yea (in Burmese, Delina).
1289	651	Banya too men yea, changed the capital; thrice married into Pegu family.
1294	656	Banya—founded Zimway.
1331	693	Nga then patchoon, his son.
1333	695	No tchoin ta yung.
1334	696	Na tchoin tarung.
1336	698	Ngathempas.
1346	707	Tao kangru.
1347	709	Tao boe yea.
1369	731	Guma.
1377	739	Gnathen nema.
1380	742	Thambi.
1420	782	Tao Banya.
1455	817	Tao sent.
1483	825	Banya yothaw.
1503	865	Tao mya ar.
1537	899	Banya tay.
1542	904	Tao mya.
1544	906	Zalapaba, his daughter, called there the Dama mahadavi.
1558	920	Len hoo mya abee, king of Pegu, took the town. His son, Narata 'tao.
1628	990	Labang family restored.
1630	992	Thadou dama yea of Pegu regained it.

A.D.	V.E.	
1763	1125	Noo ung recovered his independence.
—	—	Lochu Shan, son of Alampara of Ava, took it.
1774	1135	Benya ta Ran rebelled, threw off Burmese yoke, and joined Bankot allegiance.
1778	1140	Chou chae weet, present king.

TABLE LVIII.—*Sovereigns of Ceylon.*

From the 'Ceylon Almanack,' the Honorable George Turnour's Epitome.

A.D.	Name	Relationship of each succeeding sovereign.
543	Wejaya (Vijaya)	The founder of the Wejayan dynasty.
505	Oopalima I.	Minister, regent.
504	Panduwassa	Paternal nephew of Wejaya.
474	Abhaya	Son of Panduwassa; dethroned.
454	Interregnum.	
437	Pandukabhaya (capital Anuradhapura)	Maternal grandson of Panduwassa.
367	Mootasenwa	Paternal grandson.
307	Devanapattana	2. second son.
267	Oottiya	Fourth son of Mootasenwa.
257	Maha-senwa	Fifth ditto.
247	Surasena	Sixth ditto; put to death.
237	Sena and Goutika	Foreign usurpers; put to death.
215	Asoka	Ninth son of Mootasenwa; deposed.
205	Elasla	Foreign usurper; killed in battle.
161	Dootagaimoonoo	Son of Kaawantika.
137	Saddhatissa	Brother.
119	Techi or Thullathansaka	Younger son; deposed.
119	Lalmittissa I. or Lajjittissa	Elder brother.
109	Kaloonna or Khallata Naaga	Brother; put to death.
104	Walagumbahoo I. or Watagammal	Brother; deposed.
103	Pulasthita (usurpers)	14. 7.—Foreign usurpers; successively deposed and put to death.
100	Hasytha	
98	Panayamasara	
91	Peliyamasara	
90	Daathiya	Reconquered the kingdom.
85	Walagumbahoo I.	
76	Mahadassitissa or Mahaschoola	
62	Choora Naaga	
50	Kooda Tissa	Son; put to death.
47	Anoola	Son; poisoned by his wife.
41	Makalantissa or Kallakanni Tissa	Widow.
19	Dutiyatissa I. or Dantikaabhaya	Second son of Koodatissa.
9	Mahadassitissa Maana or Daathika	Son.
21	Addagaimoonoo or Aswanda Gammali	Brother.
30	Kinthisridatissa, or Kanjasseri Tissa	Son; put to death.
33	Kooda Abhaya or Choolakbhaya	Brother.
34	Singhawalles or Seewalli	Son.
35	Interregnum.	Sister; put to death.
38	Elloona, or Ila Naaga	Maternal nephew of Addagaimoonoo.
44	Sanda Mochoona, or Chanda Mukha	
	Seewa	Son.
52	Tessa Siloo, or Yataalakattissa	Brother; put to death.
60	Subha	Usurper; put to death.
66	Wahapp, or Wessha	Descendant of Lalmittissa.
110	Waknna, or Wanka Naamka	Son.
113	Gajabahoo I. or Gaamini	Son.

A.D.	Names.	Relationship of each succeeding sovereign.
125	Mahaloosana, or Malaka Naaga...	Maternal cousin.
131	Bantiya Tima II. or Bhatika Tima	Son.
155	Choola Tima, or Kanitta Tima	Brother.
173	Koochoona, or Choochla Naaga	Son; murdered.
183	Koodasana or Kooda Naaga	Nephew; deposed.
184	Kooda Sirima, or Shi Naaga I.	Brother-in-law.
209	Wairuhalestana, or Wairatana	Son; murdered.
231	Akha Sen, or Akha Tima	Brother.
239	Siri Naaga II.	Son.
241	Weja Indoo, or Wejaya II.	Son; put to death.
242	Sangatima I.	Descendant of Laiminika; poisoned.
246	Dahama Sirinaga Bo, or Sirinaga Bodhi I.	Ditto; deposed.
248	Guloo Abhaya, Gatha Abhaya, or Meghawarna Abhaya	Ditto.
261	Mahalan Detoo Tima I.	Son.
275	Maha Sen.	Brother.
302	Kitsiri Maiwan I. or Kirtisri, Meghawarna	Son.
330	Detoo Tima II.	Brother.
339	Bajas or Budha Dama	Son.
368	Oupatima II.	Son.
410	Maha Naama	Brother.
432	Senghot or Sotthi Sena	Son; poisoned.
432	Laimini Tima II., or Chatagnabaka	Descendant of Laimini Tima.
433	Mitta Sena, or Karalaya	Not specified; put to death.
434	Paanda	24. 9—Foreign usurpers.
439	Paanda Kooda	
455	Khudda Paanda	
455	Dasthiya	
458	Pithiya	
459	Damankulleya, or Dhaata Sena	Descendant of the original royal family; put to death.
477	Sigiri Karumbloo, or Kasappa I.	Son; committed suicide.
495	Moogulana I.	Brother.
513	Kumara Dasa, or Komsara Dhaat Sena	Son; immolated himself.
522	Kirti Sena	Son; murdered.
531	Meidi Siwey, or Siweka	Maternal uncle; murdered.
531	Laimini Oupatima III.	Brother-in-law.
534	Ambaharra Salamaivan, or Sita- kala.	Son-in-law.
547	Daspuloo I. or Dasthampa Bhodol.	Second son; committed suicide.
547	Dajamagan, or Moogulana II.	Elder brother.
567	Kula Kitsiri Maiwan I. or Kirtisri Meghawarna	Son; put to death.
586	Senow, or Maha Naaga	Descendant of the Okaka branch.
589	Aggrahodhi I. or Akbo	Maternal nephew.
623	Aggrahodhi II. or Sena Akbo	Son-in-law.
633	Sanghatima	Brother; decapitated.
633	Bocna Moogulan, or Laimini Bo- naaya	Usurper; put to death.
638	Abhasegnabaka, or Aggnabaka	Maternal grandson.
648	Siri Sangabo II.	Son; deposed.
648	Kalona Detootana, or Laimina Katooreya.	Descendant of Laimini Tima; committed [suicide.]
649	Siri Sangabo II.	Restored, and again deposed.
666	Daloopeetana I. or Dasthagatana	Laimini branch; killed in battle.
677	Paisooloo Kasombo, or Kasappa II.	Brother of Sirinagabo.
686	Daspuloo II.	Okaka branch; deposed.

A.D.	Name.	Relationship of each succeeding sovereign.
693	Daloopeetias II. or Hattha-Datto- patissa .....	Son of Daloopeetias I.
702	Pulsoolos Sri Sanga Bo III. or Aggrabodhi .....	Brother.
718	Walpiti Wasidata, or Dantassama	Okaka branch.
729	Hoonsonara Rianahar Hatthada- tha .....	Original royal family; decapitated.
730	Mahalaipassoo, or Maanawamma ..	Ditto.
736	Kassiyappa III. or Kassombo .....	Son.
739	Aggrabodhi III. or Akko .....	Nephew.
769	Aggrabodhi IV. or Kuda Akko .....	Son (capital Polonnaruwa).
716	Mihindoo I. or Salamaivan .....	Original royal family.
795	Dappoola II. ....	Son.
800	Mihindo II. or Dharmika-Sodham- aiga .....	Son.
804	Aggrabodhi V. or Akko .....	Brother.
816	Dappoola III. or Kula Dappoola ..	Son.
831	Aggrabodhi VI. ....	Cousin.
838	Mitwella Sen, or Solamaiga .....	Son.
859	Kassiyappa IV. or Mangarya Sena, or Mihindoo .....	Grandson.
891	Udaya I. ....	Brother.
926	Udaya II. ....	Son.
937	Kassiyappa V. ....	Nephew and son-in-law.
954	Kassiyappa VI. ....	Son-in-law.
964	Dappoola IV. ....	Son.
964	Dappoola V. ....	Not specified.
974	Udaya III. ....	Brother.
977	Sena II. ....	Not specified.
986	Udaya IV. ....	Ditto.
994	Sena III. ....	Ditto.
997	Mihindoo III. ....	Ditto.
1013	Sena IV. ....	Son; minor.
1023	Mihindoo IV. ....	Brother; carried captive to India during the Soloman conquest.
1059	Interregnum .....	Soloman vice-royalty.
1071	Wejyabahoo I. or Sirisangabo IV.	Grandson of Mihindoo IV.
1126	Jayabahoo I. ....	Brother.
	Wikramabahoo I. ....	
1127	Gajabahoo II. ....	A disputed accession.
1163	Prakramabahoo I. ....	Son of Maasaburana.
1186	Wijayabahoo II. ....	Nephew; murdered.
1187	Mihindoo V. or Kibben Kishana ..	Usurper; put to death.
1187	Kirti Nissanga .....	A prince of Kalinga.
1196	Werabahoo .....	Son; put to death.
1198	Wikramabahoo II. ....	Brother of Kirti Nissanga, put to death.
1196	Chandakanga .....	Nephew; deposed.
1197	Leelawati .....	Widow of Prakramabahoo; deposed.
1200	Saahasamalawa .....	Okaka branch; deposed.
1202	Kalyanawati .....	Sister of Kirti Nissanga.
1206	Dharmasooka .....	Not specified; a minor.
1209	Nayyanga or Nikanga .....	Minister; put to death.
1209	Leelawati .....	Restored, and again deposed.
1210	Loknawara I. ....	Usurper; deposed.
1211	Leelawati .....	Again restored, and deposed a third time.
1211	Pandi Prakrama Bahoo II. ....	Usurper; deposed.
1214	Mangha .....	Foreign usurper.
1235	Wejyabahoo III. (son Dambadima)	Descendant of Sirisangabo I.
1266	Kalikaala Sahitya Sargawajya, or Paandita Prakrama Bahoo III. ....	Son.

A.D.	NAME.	Relationship of each succeeding sovereign.
1301	Bosai Wejaya Bahoo IV. ....	Son.
1303	Bhawaneka Bahoo I. ....	Brother.
1314	Prakrama Bahoo III. ....	Son of Bosai Wejaya Bahoo.
1319	Bhawaneka Bahoo II. (at Hasti- nāpura) ....	Son of Bhawaneka Bahoo.
	Pandita Prakrama Bahoo IV. ....	Not specified.
	Wanoy Bhawaneka Bahoo III. ....	
	Wejaya Bahoo V. ....	
	Bhawaneka Bahoo IV. (at Gampala) ....	
1347	Prakrama Bahoo V. ....	Cousin.
1371	Wikrama Bahoo III. (at Kandy) ....	
1378	Bhawaneka Bahoo V. ....	Not specified.
1398	Wejaya Bahoo V. or Waura Bahoo ....	
1410	Sirī Prakrama Bahoo VI. (at Kotia) ....	Maternal grandson, put to death.
1462	Jayaa Bahoo II. ....	
1464	Bhawaneka Bahoo VI. ....	Not specified.
1471	Pandita Prakrama Bahoo VII. ....	Adopted son.
1485	Wira Prakrama Bahoo VIII. ....	Brother of Bhawaneka Bahoo VI.
1505	Dharma Prakrama Bahoo IX. ....	Son.
1527	Wejaya Bahoo VII. ....	Brother, murdered.
1534	Bhawaneka Bahoo VII. ....	Son.
1542	Don Juan Dharmapala ....	Grandson.
	A Malabar, at Yapahut.	
	Portuguese at Colombo.	
	Weediya Raja, at Pallinda Nawera.	
	Rasasingha, at Alwimawella.	
	Idirannoney Suriya, at Seven Kotes.	
	Wikrama Bahoo, at Kandy.	
1581	Rasasingha I. ....	Son of Mayasadunnal.
1592	Wimala Dharma ....	Original royal family.
1604	Senasarutana, or Senaral ....	Brother.
1635	Rasasingha II. ....	Son.
	Koomara-singa. ....	Brother.
	Wijaya Puals. ....	Brother.
1685	Wimala Dharma Suriya II. ....	Son of Rasasingha.
1707	Sriwira Prakrama Narendra-singha, or Koundasala ....	Son.
1739	Sriwenjaya Rasasingha, or Hangu- pantata ....	Brother-in-law.
1747	Kirtiri Rasasingha ....	Brother-in-law.
1781	Rasajadhi Rasasingha ....	Brother.
1798	Bawa Vikrama Rasasingha ....	Son of the late king's wife's sister, de- posed by the English, and died in cap- tivity.

In the native mode of recording the lengths of individual reigns, without refer-  
ring them to a fixed epoch, anachronisms are unavoidable: Mr. Turnour has judi-  
ciously applied the following fixed points to correct the foregoing table.

B.C.	543	The landing of Vijaya, in the year of Buddha's death.
	307	The mission from Dharmapala to establish Buddhism in Ceylon.
	104	The conquest of Ceylon by the Malabars.
	90	The founding of Abhayagiri by Wala gambahn.
A.D.	209	The date of the Vaitaliya heresy, in Vaivahara's reign.
	252	The revival of ditto, in the reign of Gold Abhaa.
	391	Death of Mahasen, 4 years anachronism.
	545	Another revival of the Vaitaliya heresy, in Ambakira's reign.
	838	Origin of the Vijaya waddiya heresy, in Mitwella Séu's reign.
	1163	The accession of Prakrama Bahō, 6 years anachr.

- A.D. 1200 Ditto of Sahasr Mallawa, by Dambulla rock inscription, A.D. 1473.  
 1266 Ditto of Pandita Prākrama Bāhū III., error seven years.  
 1347 Ditto of Bhuvanika Bāhū IV.

In the remaining portion of the history of Ceylon, other materials have not been wanting for the adjustment of its chronology.

TABLE LIX. *Greek dynasties in Asia, founded after the death of Alexander the Great, by his Generals, etc.*

SYRIA.	
B.C.	A.D.
334 Alexander the Great; born, 356; died, 323.	127 Antiochus VII. Sidetes.
312 Seleucus I. Nicator.	128 Alexander II. Zebina.
280 Antiochus I. Soter.	125 Selucus V.
261 Antiochus II. Theos.	123 Antiochus VIII. Grypus.
246 Seleucus II. Callinicus.	113 Antiochus IX. Cyzicus.
226 Seleucus III. Ceraunus.	96 Seleucus VI. Epiphanes.
223 Antiochus III. Magnus. (Achæus.)	95 Antiochus X. Eusebes.
187 Seleucus IV. Philopator.	Antiochus XI. Epiphanes Philip, and
176 Antiochus IV. Epiphanes.	94 Demetrius III. Eucorus.
164 Antiochus V. Eupator.	88 Antiochus XII. (Dionysius of Josephus).
163 Demetrius I. Soter.	83 Tigranes, of Armenia.
160 Alexander I. Balas.	69 Antiochus XIII. Asiaticus.
147 Demetrius II. Nicator.	65 Syria became a Roman province.
144 Antiochus VI. Theos.	
142 Tryphon.	

PARTHIA.	
B.C.	A.D.
246 <sup>1</sup> Arsaces I.	(Cinnamus)
233 Tiridates * I.	(Artabanus III.)
216 Artabanus I.	42 Bardanes.
196 Phraortes.	45 Gotarzes.
181 Phraortes I.	50 (Mithradates).
173 Mithradates I.	81 Vonones II.
136 Phraortes II.	81 Vologases I.
126 Artabanus II.	62 (Artabanus IV.)
123 Mithradates II.	77 Pacorus.
67 Mithradates.	108 Chosroes.
77 Sinatruces.	115 (Parthamepatas).
70 Phraortes III.	116 (Chosroes restored).
60 Mithradates III.	121 Vologases II.
54 Orodes I.	145 Vologases III.
37 Phraortes IV.	192 (Vologases IV.)
(Tiridates II.)	209 (Vologases V.)
(Phraortes IV.)	Artabanus V.
A.D. 4 Phraortes.	235 Artaxerxes, King of Persia, 1st of the Sassanids. (See table LXI).
5 Orodes II.	
8 Vonones I.	
13 Artabanus III. (Tiridates III.)	

# KNOWN KINGS OF BACTRIA.

[I have omitted this list of Prinsap's, which was necessarily less complete than the elaborated series already inserted at p. 173, vol. II. of this work]

<sup>1</sup> The dates in this list, as well as the new names inserted in brackets, are taken from Mr. Lindsay's work on Parthian coins. The titles of the kings appended to Prinsap's note \* are also corrected up from the same authority.]

\* The family name Arsaces is applied to all the princes of Parthia, hence called





SASSANIAN DYNASTY.

- Kai-kobād (*kai* signifies the mighty).  
 Kai-Kāda, son or grandson. Kavad his general.  
 Kai-Khusrū, grandson. Cyrus the great.  
 Lehrsap, son of Orontē Shāh. (Cambyses omitted?)  
 Guahthap, his son. Hytaspes of Greician history.  
 Isfendiār, his son. Apandā or Astyages of ditto.  
 Kai Bahman, or Ardashir darīndast. ARTASERES LONGIMANUS.  
 Homā, daughter and wife of ditto.  
 Dārā, son of ditto.  
 Dārā, his son: the Darius overthrown by Alexander the Great.  
 (The Mulūk-tawāif, or petty kings, following Alexander, called by the Persians the Ashkanians and Ashghanians, have been given above as the Arsacids of the Greeks.—J.P.)

TABLE LXI.—Kings of Persia, of the Sassanian race.

[The subject of the dates of the accessions of the Sassanian dynasty is involved in some obscurity, from the practice prevailing of reckoning by the years of each king's reign instead of following the order of a single cycle.<sup>1</sup> I have contented myself for the present with quoting the dates given in Dr. Smith's Dictionary, and appending Dr. Mordmann's latest determinations *à propos* to his elaborate coin illustration of the history of the race.]

Smith, Mordmann.

A.D.	A.D.		
226	226	1	Ardashir-Bābargān bin Shāh, or Artaxerxes. <sup>2</sup>
240	238	2	Shahpūr, Shapur, or Sapor, captured Valerian.
273	269	3	Hormuzd or Hormisdas.
274	271	4	Bahurām, or Varanes I.
277	274	5	Bahurām, or Varanes II.
294	291	6	Bahurām, or Varanes III. Begun Shāh.
294	291	7	Narsē or Narses, conquered Armenia and Galerius.
303	300	8	Hormuzd, or Hormisdas II.
310	308	9	Shahpūr, or Sapor II.
381	380	10	Ardashir, or Artaxerxes II.
385	383	11	Shahpūr, or Sapor III.
390	389	12	Bahurām, or Varanes IV. Kermān Shāh.
404	399	13	Yezdegird, or Idigerdus I. <sup>3</sup>
420	420	14	Bahurām-gur, or Varanes V. visited India.

<sup>1</sup> [Hamzah Isfahāni, Latin Preface, p. vi.]

<sup>2</sup> From Moses of Chorene:—

A.D.	Years.	A.D.	Years.
232	Artaxerxes reigned 52	421	Artaxerxes II. reigned 4
285	Sapores I. 31	435	Varanes I. Germanus 10
	Nerses 9	435	Idigerdus I. 11
344	Hormisdas 5	446	Varanes II. 21
	(contemporary of Constantine).	467	Idigerdus II.
	Idigerdus		Feroz II. in whose reign Moses of
	(7th year of Constantine).		Chorene lived.—J.P.
381	Sapores II. 19		

<sup>3</sup> [Some authors insert a second king of this name after Yezdegird I.—Hamzah Isfahāni, p. 14. Mordmann, p. 64; but there seems to be no sufficient authority for the interpolation.]

Smith. Nordmann.  
A.D. A.D.

448	440	15	Yazdegerd, or Isdegerde II.
458	457	16	Hormuzd, or Hormisdas III.
458	458	17	Firda, or Perose, allied with Khôkân of Huns.
484	485	18	Balla, Palash, or Ballasena.
488	491	19	Kobâd, or Cavades.
498	498	20	Jamasp. (Kobâd recovers kingdom 501.)
531	531	21	Khoerû, Koori (Nushîrvân), or Chosroes.
579	579	22	Hormuzd, or Hormisdas IV. deposed by his general (Varanes VI. A.D. 590, M. A.D. 591.)
591	591	23	Khoerû-Parvîz, Koori, or Chosroes II. put to death by
628	628	24	Kobâd Shîrôyîk, or Siroen.
	629	25	Ardeashîr III. Anarchy.
	629	26	Shahrîr or Shabanas.
	629	27	Parûn-Dakht.
	631	28	Azernî-Dakht.
	631	29	Perokh-zad-Dakhtyar.
	632	30	Yazdegerd or Isdegerde III. overthrown by Musalmâns 641.

TABLE LXII.—*Khalifs, viceregents or successors of Mahomed or Muhammad bin Abd-allâh, whose death occurred in the 11th of Hijra era, or A.D. 632.*<sup>1</sup>

(This and the following from Marsden's 'Numismata Orientalia,' corrected up from later Numismatic works.)

A.D.	A.D.		
11	633	1	Abûbakr
13	634	2	Umar.
23	644	2	U'smân.
30	650	4	A'U.
40	661	5	Hasan bin A'U, retired to Medina—Husain killed at Kербela
RACE OF UMMIYAH, RESIDING AT DAMASCUS.			
41	661-2	1	Mu'wiah I.
60	679-80	2	Yazid bin Mu'wiah.
64	683-4	3	Mu'wiah II. bin Yazid.
64	684	4	A'bfallah bin Zuhair.

<sup>1</sup> [632 A.D. is the date of the commencement of this king's reign, which has given the initial year to the era bearing his name. See p. 142, vol. II. *note*, Ockley's 'Hist. Saracens,' pp. 145, 277.]<sup>2</sup> [I have altered the original transliteration of these names in order to reduce the orthography of the Roman equivalents to as close an adherence to the literal definition of the original Kufic as the nature of our English system of writing will permit. The nine letters of the Arabic alphabet, whose powers have been perverted in the utterance of foreigners, have been made to follow the Persian system of phonetic expression, and are severally represented by the following English pointed or accented equivalents:—

ا	ب	ت	ث	ج	ح	خ	د	ذ
â	â	â	â	â	â	â	â	â
â	â	â	â	â	â	â	â	â

The Arabic powers of these letters are severally—1. *â* (*thick*); 2. *â*; 3. *âh* (*thick*); 4. *â*; 5. *â*; 6. *â*; 7. *th* (*father*); 8. *â*; 9. *â* (*guttural*). I have not concerned myself greatly with the correction of the equivalents of the Arabic short vowels, but it may be noted that, under the old system, the English vowel *e* ordinarily stood for what modern practice represents by the short *a*, though in many cases it was inserted indifferently in the place of the *i*.]

A.H.	A.D.		
64	684	5	Marwān bin Ḥakīm.
65	684-5	6	A'bd-ul-malik bin Marwān.
86	705	7	Walid bin A'bd-ul-malik.
96	714-15	8	Sulaimān bin A'bd-ul-malik.
99	717-18	9	U'mar bin A'bd-ul-'azīz.
101	719-20	10	Yazīd II. bin A'bd-ul-malik.
105	723-4	11	Ḥishām bin A'bd-ul-malik.
125	742-3	12	Walid II. bin Yazīd.
126	743-4	13	Yazīd III. bin Walid.
126	744	14	Ibrāhīm bin Walid.
127	744-5	15	Marwān II. bin Muḥammad, deposed and slain.

## KINGS OF AL-A'EMIA, REIGNING AT BAGHDAD.

132	749-50	1	Abūl A'bbās al-saffār.
136	753-4	2	Almansūr.
156	774-5	3	Al-Mahdī bin al-Manṣūr.
169	785-6	4	Al-Hādī bin al-Mahdī.
179	786-7	5	Harūn al-Rashīd bin al-Mahdī.
193	809-10	6	Al-amīn bin al-Rashīd.
198	813-14	7	Al-Ma'mūn bin al-Rashīd.
202-3			Ibrāhīm bin Al-Mahdī, competitor, 817-18.
218	833-4	8	Al-Ma'tasim billah bin al-Rashīd.
227	841-2	9	Al-Wāsiq billah bin al-Ma'tasim.
232	846-7	10	Al-Mutawakkil a'lillah bin Ma'tasim.
247	861-2	11	Al-Musta'iz billah bin Mutawakkil.
248	862-3	12	Al-Ma'mūn billah bin Muḥammad bin Ma'tasim.
252	866-7	13	Al-Ma'tas billah bin Mutawakkil.
255	868-9	14	Al-Muhtadi billah bin Wāsiq.
256	869-70	15	Al-Ma'tamed a'lillah bin Mutawakkil; Egypt independent.
			Muwaffiq billah, his coadjutor from 871 to 891.
279	892-3	16	Al-Ma'tasid billah bin Muwaffiq.
289	901-2	17	Al-Muktafi billah bin Ma'tasid; provinces independent.
295	907-8	18	Al-Muktadar billah bin Ma'tasid; murdered by a eunuch.
320	932	19	Al-Kādir billah bin M'tasid.
322	933-4	20	Al-Rāzī billah bin Muktadar; Amir al ummā powerful.
329	940-1	21	Al-Mustakī billah bin Muktadar.
333	944-5	22	Al-Mustakfi billah bin Muktadar.
334	945-6	23	Al-Must'illāh bin Muktadar.
363	973-4	24	Al-Tā' billah bin Mu'tr.
381	991-2	25	Al-Kādir billah bin Isḥāk Muktadar.
422	1036-1	26	Al-Kāim beamrillah Abū Ja'far A'bd-Allah bin Kādir.
467	1074-75	27	Al-Muktadi billah Abūl Kaṣim A'bdallah bin Muḥammad bin Kāim beamrillah.
487	1094-5	28	Al-Mustaghīr billah bin Muktadi.
512	1118-9	29	Al-Mustarshid billah bin Mustaghīr.
529	1134-5	30	Al-Rashīd billah bin Mustarshid.
530	1135-6	31	Al Muktafi beamrillah bin Mustaghīr.
555	1169	32	Al-Mustanjid billah bin Muktafi.
566	1179-1	33	Al-Mustajī beamrillah bin Mustanjid.
575	1179-80	34	Al-Nāṣir bi-dīnillah bin Mustanjid, professes Shi'ah doctrine.
622	1225	35	Al-Zahīr beamrillah Muḥammad bin Nāṣir.
623	1226	36	Al-Mustansir billah Abū Ja'far Al-Manṣūr bin Zahr.
640	1242-3	37	Al-Mustasim billah Abū Ahmad A'bd-Allah bin Mustansir.

In the year 656 (1258), Bagdad was besieged and taken by the Mogul Chief Hulāgu, grandson of Jenghiz Khān, and the Khalīf Mustasim put to death.

[I have introduced among Prinsep's original extracts the Tables marked C. D. E. which have been compiled chiefly from the work of

Hamzah Isfahānī,<sup>1</sup> for the purpose of illustrating more fully the annals of the Eastern provinces of the empire of the Khalifs, the successional history of which may chance to throw light upon some of the obscure dynasties of the conterminous kingdoms of India, whose epochs and transitions are so peculiarly identified with the objects of these volumes.

TABLE C.—*Arab Governors of Khordān: capitals, Merv, Nishāpūr, Bukhārā.*

(A'bdallāh bin Tāhir adopts the second, Ima'ūl bin Ahmad the third.)

A.H.	A.D.		A.H.	A.D.	
129	747	Abū Muslim.	173	790	Alhasan bin Kahtabah.
137	785	Abū Dāūd Khālī bin Tharīm.	173	792	Ghāzī bin A'th.
140	787	Abū A'sām bin Sulam.	177	792	Hamzah bin Mālik.
142	789	A'bdul-Jahūr bin A'bdulrahman.	177	792	Alfarū bin Yahyā bin Khālid.
143	790	Harim bin Humayyah.	179	795	A'marū bin Hamal.
144	793	Abū A'ūn A'bd ul Malik.	179	796	Manṣūr bin Yazid bin Alkhā- lid Al-mahdī.
149	796	Abū Malik Asid bin A'bdallāh.			Jafar bin Yahyā.
150	798	Hasan (again).	180	796	A'li bin A'ad bin Mūhān.
151	798	Humid bin Kahtabah.	192	808	Harasah bin Aa'yūn.
159	776	A'bdallāh bin Humid.	192	809	Al Māmūn (subsequently Kha- līf).
160	776	Abū A'ūn.	196	812	Alfarū bin Sāid (nominated)
		Ma'ad bin Muslim.	204	816	Rajā bin Zabak.
163	780	Zahīr bin Almasb.			Ghāzī bin A'had.
165	782	Alfarū bin Sulaymān.			
170	787	Jafar bin Muhammad.			

TABLE D.—*Tukherides.*

204	810	Tāhir bin Al-Hasan.	230	844	Tāhir bin A'bdallāh.
207	823	Talḥah bin Tāhir.	248	893	Muhammad bin Tāhir.
213	829	A'bdallāh bin Tāhir.			

TABLE E.—*Saffarids.*

259	873	Ya'kūb bin Laṣ.
264	878	A'marū bin Laṣ, defeated by Ima'ūl bin Ahmad, the Samāni in A.H. 287, A.D. 900.
287	900	Tāhir bin Muhammad <del>recesses</del> in Sistān (Price II. 233).

TABLE LXIII.—*Sāmāni or Sāmānī Dynasty of Bukhārā, Khordān and Persia.*

A.H.	A.D.	
201	874-5	1 Nasr bin Ahmad, great grandson of Samān, a <i>robber chief</i> , appointed governor of Bukhārā by the Khalīf Ma'tamūd.
279	892	2 Ima'ūl bin Ahmad.
295	907	3 Ahmad bin Ima'ūl.
301	914	4 Nasr bin Ahmad.
331	943	5 Nūh bin Naṣr.
343	954	6 A'bd-ul-malik bin Nūh.
350	961	7 Al-Manṣūr bin Nūh.
366	976	8 Nūh bin Al-Manṣūr. [By some authorities this accession is placed in Rajab, A.H. 365.]
387	997	9 Al-Manṣūr bin Nūh, deposed and blinded.
389	999	10 A'bd-ul-malik bin Nūh. [Allek Khān enters Bukhārā on the 10th of Dī'sā'dah, A.H. 389.]
		11 Ima'ūl bin Nūh, killed in the 3rd month of A.H. 395.]

<sup>1</sup> حمزه بن الحسن الصفهاني (composed in A.H. 330 = A.D. 961-2) edit. of M. Gottwaldt: Lipsia, 1848

TABLE LXIV.—*The Ghazni Dynasty, with the cotemporary Khalifs whose names appear on the local coinage.*

(From the 'Jour. Roy. As. Soc.,' 1848.)

Chronology of reigns.	Accepted Dates of Accession.			Kings of Ghazni.	Notions of various Dates assigned by different authorities.
	A.D.	A.H.	A.D.		
Al Murt' Nishah ... Abdicated, D'f Ka'dah, 363	384				
		359	961	Alptegin .....	Revolt 350, Rasm al Safa.
Al Tuf Nishah..... Deposed by Bahā al dowlah (Sha- hān), 381	363				
		365	975	Ishak .....	Alptegin's death doubtful. (Abd Ishak Ibrahim, "Ibn Haukal.")
		367	977	Subuktigin	
Al Kadir Nishah ... Died, D'f Hajah, 422	381				
		387	997	Ismā'il .....	Subuktigin's death, 386, Nāsirī, Jandī; 387, Abul Faraj; 387 (Shahān), Rasm al Safa, Abul Fida, Khalkat al Akh- bār.
		388	998	Mahmūd .....	Entitled Saif al dowlah, 384; takes possession of Ghazni, Raid al Awal, 388; becomes independent, 389.—Various authorities.
		421	1030	Muhammed ..	Mahmūd's death, Raid al Akhir, 421, Abul Fida, Khalkat al Akhbār.
		421	1030	Mam'ūd .....	Muhammed's 1st reign, 7 mths., Nāsirī. Mam'ūd's accession, 422, Nāsirī; 421 (3rd Shawwāl), Rasm al Safa, Khalkat al Akhbār.
Al Kāim hamrūl- lah ..... Died, 13 Shahān, 467	422				
		432	1040-1	Muhammed ..	Rebellion against Mam'ūd, 432 (Raid al Akhir), Abul Fida; Muhammed's restoration, 432, Nāsirī, Abul Faraj; 432 (Jumād al Awal), Akhbar; 432, Habīb al Saif; 433 (Jumād al Awal), Guzidāh.
		432	1041	Mahmūd .....	Muhammed's 2nd reign, 6 mths., Nāsirī. Mahmūd's accession, 432 (Shahān), Mam'ūd, 432, Nāsirī, Abul Faraj. Entry into Ghazni, 432 (13rd Sha- hān), Abul Fida. Accession, 434, Guzidāh; 433, Khalkat al Akhbar; Ferisbah.
		440	1048	Mam'ūd II...	Mahmūd's death, 441, Nāsirī, Abul Faraj; 441 (Hajah), Abul Fida, Guzidāh, Rasm al Safa, Khalkat al Akhbar, Habīb al Saif.



TABLE LXV.—*Sultans of the Seljuk Dynasty.*

[The grandsons of Seljuk, a Turk of the tribe of Kharaz or Ghar on the Caspian, Toghrul-beg and Jâfer-beg Dâud, were in the service of Mahmûd of Ghazni. In A.H. 429 (1036), the former resisted Maas'ûd, and received investiture as Sultan of Khorân from the Khalîf. The three branches of the Seljuk family settled in Hamadân, Kermân, and Rum or Anatolia.—Marsden's 'Or. Num.']

## I.—SELJUK DYNASTY OF IRÂN OR PERSIA.

A.H.	A.D.	
429	1037	Baka-ud-din Abuthaleb, Toghrul Beg, Mahmûd.
455	1063	Alp Arslan, Aburahma, Asî ud-din.
466	1072	Malikshâh, Maas'ud-din abul ftech.
485	1092	Burkharok, ruku-ud-din abulmucaffer khairi: in his reign the empire was divided, he retaining Persia; Ghiâs ud-din Muhammad, Syria and Ader-bijân; and Maas'ud-din burhân anjâr, Khorêsm and Maverulnahr.
498	1104	Malik Shâh, his son, deposed.
498	1105	Muhammad, chosen Sultan.
511	1118	Mahmûd, Moghiâth ud-din Abul Kâsem.
525	1131	Dâud, his son, deposed.
526	1131	Maas'ûd, Ghiâth ud-din, deposed.
527	1132	Toghrul, son of Muhammad.
529	1134	Maas'ûd, re-established.
547	1152	Malik Shâh, son of Mahmûd, deposed.
547	1152	Mahmûd, grandson of Rûgrakhan, at Merv.
552	1157	Muhammad, his son, at Hamadân.
554	1159	Sulaimân Shâh, killed.
555	1160	Arslân Shâh, son of Toghrul, son of Muhammad.
571	1175	Toghrul Shâh, his son.

## II.—SELJUK DYNASTY OF KERMÂN.

433	1041	Kadherd, or Karut beg, installed by Toghrul beg.
466	1072	Sultan Shâh, his son.
467	1074	Turân Shâh.
489	1096	Iras Shâh.
494	1100	Arslân Shâh.
536	1141	Moghiâth ud-din Muhammad.
551	1156	Toghrul Shâh.
565	1169	Bahram, Arslân, and Turân Shâh dispute succession.
—	—	Muhammad Shâh, dispossessed by Malik dinar 583-1187.

## III.—SELJUK DYNASTY OF RÛM OR ANATOLIA. CAPITAL ICONIUM.

470	1077	Sulaimân bin Kothamsh.
478	1085	Interregnum of seven years.
485	1092	Dâud Kilij Arslân bin Sulaimân.
501	1107	Bahsan bin Kilij Arslân.
510	1116	Maas'ûd bin Kilij Arslân.
551	1156	A'zz-ud-din Kilij Arslân bin Maas'ûd, destroyed first crusade army.
584	1118	Kuth-ud-din Malik Shâh bin Kûik Arslân, deposed.
588	1192	Ghiâs-ud-din Kai Khurâd bin Kilij Arslân, deposed.
596 ?		Rukn-ud-din Sulaimân bin Kilij Arslân, deposed.
600	1203	Kilij Arslân bin Rukn-ud-din, deposed.
600	1203	Ghiâs ud-din Kai Khurâd (restored).
607	1210	A'zz-ud-din Kai Kâus bin Kai Khurâd.
616	1219	A'îâ-ud-din Kai Kôbûd bin Kai Khurâd.
634	1236	Ghiâs-ud-din Kai Khurâd bin Kai Kôbûd, invaded by the Mogul Princes, descendants of Jenghiz Khân (See Table XLIX).
643	1246	A'zz-ud-din Kai Kâus, in nominal conjunction with his brothers, Rukn-ud-din and A'îâ-ud-din, sons of Kai Khurâd.
665	1267	Rukn-ud-din Kilij Arslân.
665	1267	Ghiâs-ud-din Kai Khurâd bin Rukn-ud-din.
682	1283	Massûd bin A'zz-ud-din Kai Kâus, died 708—1308.



TABLE LXVI.—*Atabegs of Irbil, ruling Ministers under the later Princes of the Seljukian race.*

		NORTH BRANCH.	
A.H.	A.D.		
521	1127	I'mād-ud-dīn Zengi.	
540	1145	Saif-ud-dīn Ghāsi bin Zengi.	
544	1149	Kuth-ud-dīn Ma'ūd bin Zengi.	
565	1170	Al-Mu'iz Saif-ud-dīn Ghāsi bin Mōdūd.	
576	1180	A'iz-ud-dīn Ma'ūd bin Mōdūd.	
589	1193	Nūr-ud-dīn (Bedr ud-dīn) Arslān Shāh bin Ma'ūd.	
607	1210	Malik al-Kābir A'iz-ud-dīn Ma'ūd bin Nūr-ud-dīn.	
615	1218	Nūr-ud-dīn Arslān Shāh bin Kābir.	
616	1219	Nāzir-ud-dīn Mahmūd bin Kābir.	
619	1222	Al-Malik al-Rahim Bedr-ud-dīn Lād.	
657	1259	Al-Malik as-Sālah Isma'īl bin Lād.	
		SOUTH (ALEPPO) BRANCH.	
521	1127	Imād ud-dīn Zengi.	
540	1145	Malik al-A'ahd Nūr-ud-dīn Mahmūd bin Zengi.	
569	1174	A'l-Malik as-Sālah Isma'īl bin Nūr-ud-dīn Mahmūd.	
577	1181	I'mād ud-dīn Zengi bin Kuth-ud-dīn bin Mōdūd, delivered Haleb to Sālah-ud-dīn as-Sālah.	
604	1197	Kuth-ud-dīn Muhammad bin I'mād-ud-dīn, at Singara.	

TABLE LXVII.—*Turkoman Ortokids Princes, reigning in Mardin and Musfakin, Syria.*

		ORTOKIDS REIGNING AT AMID AND ERZINA.	
A.H.	A.D.		
514	1132	Il Ghāsi bin Ortok, seized Jerusalem and Mardin.	
547	1152	Husām-ud-dīn Timurshāh bin Il Ghāsi.	
572	1176	Najm-ud-dīn Abu'l-Mu'awwar Alā bin Timurshāh.	
572	1176	Kuth-ud-dīn Il Ghāsi bin Alā (or Aiyū).	
580	1184	Husām-ud-dīn Yāsiq Arslān bin Kuth-ud-dīn.	
597?		Malik al-Mu'awwar Nāzir-ud-dīn Ortok Arslān bin Kuth-ud-dīn.	
637	1239	Malik as-Sā'īd Najm-ud-dīn Ghāsi bin Nāzir-ud-dīn Ortok.	
663	1265	Malik al-Mu'awwar Karā Arslān bin Najm-ud-dīn.	
691	1291	Shams-ud-dīn Dād.	
693	1293	Malik al-Mu'awwar Najm-ud-dīn Ghāsi.	
719	1319	Alā Malik al-A'ahd I'mād-ud-dīn A'l.	
712	1312	Malik as-Sālah Shams-ud-dīn Sālah.	

		ORTOKIDS REIGNING AT AMID AND ERZINA.	
A.H.	A.D.		
490	1097	Sokman bin Ortok.	
498	1104	Ibrāhīm bin Sokman.	
522?	1129	Rukn ud-dīn Dād.	
544?		Fakhr ud-dīn Karā Arslān bin Dād.	
562	1169	Nūr ud-dīn Muhammad bin Karā Arslān.	
581	1185	Kuth-ud-dīn Sokman bin Muhammad.	
597	1200	Malik as-Sālah Nāzir ud-dīn Mahmūd.	
618	1221	Malik al-Mu'awwar bin Malik as-Sālah Mahmūd.	
629	1231	Malik al-Kāmil, nephew of Sālah ud-dīn (Saladin), took Amid.	

TABLE LXVIII.—*The Mogul or Moghul empire of Tartary. Capital Karakum.*

A.D.	
1206	Jengiz Khān, or Timagin declared emperor, on the Onon river.
1227	Tolā Khān, his son, regent during interregnum.
1241	Oktai Khān, fourth son of Jengiz, elected by his father's will.
	Tourakina Khatun, his wife, regent for four years.
1248	Gaiuk Khān, son of Oktai.

- A.D.  
1248 Oghulgaunish, his wife, regent on his death.  
1261 Mangū Khān, died in 1259.

The empire of the Moghuls was subsequently divided into different branches in China, Persia, in Kapehak, etc.

- 1260 Kublai Khān, succeeded in China, and founded the Yuen dynasty.  
1240 Zagatai Khān, son of Jengiz, founded Zagatai branch in Transoxiana.  
1226 Tuchi Khān, another son, founded Kapehak dynasty.

(For these dynasties of the Tartars, and those of the Huns, Chinese, etc., see De Guignes' *Histoire des Huns*.—J. P.)

TABLE XLIX.—*Moghul-Tartar or Il-Khānian Dynasty of Persia.*

On the death of Mangū Khān, son of Jengiz Khān, the sovereignty of Persia was assumed by his brother,

A.D.	A.D.	
657	1259	Hölāqū or Hölāqū Il-Khān.
663	1264	Abāqū, or Abāqū Il-Khān, his son.
681	1282	Nikulaṛ Oghlan, seventh son of Hölāqū, on conversion to Muhammadism, took the name of Ahmad Khān.
683	1284	Arghūn Khān, son of Abāqū.
690	1291	Kai-Khōd Khān, ditto.
694	1294	Ḥaidū Khān, son of Targhān, 28th son of Hölāqū.
694	1294	Ghāzān Khān Mahmūd, eldest son of Arghūn.
703	1303	Ghāzān-dīn Auz-guptā, Khudabandah Muhammad.
716	1316	Abū Sa'īd Bahādur Khān, his son, on whose death is
730	1335	The dynasty became dependent.
747	1346	Anāshīrvān. Invasion of Taimūr, or Tamerlane. (See below, LXX).

TABLE LXX.—*Moghul Sultans of Khurāsān.*

795	1363	Kuth-ud-dīn Amir Tīmūr Gūrgān Shāhshāh (Tamerlane) conquered
		Bukhārā, invaded India, etc.
807	1404	Khōdā Sultān, son of Mirzā Shāh, deposed.
—	—	Shāh Rukh, Behādur Sultān.
850	1447	Ulugh Beg, Malik us Sa'īd, of Khiva.
853	1449	A'ḥmāḍ Latīf Mirzā, his son.
864	1450	Bābur Mirzā, Sultān Abul Kasim.
861	1450	Mirzā Shāh Mahmūd deposed.
861	1450	Abū Sa'īd, son of Ahmad. (See Moghuls of India.)
—	—	Jiādighiār, grandson of Shāh Rukh.
868	1470	Sultān Ḥusain Mirzā, grandson of Ulugh.
901	1503	Budī' azamkhān, his son, took refuge with the Sufis.

TABLE LXXI.—*Kings of Persia of the Saphi, Safi, or Saffi Race.*

Junaid, a descendant of Saffi ud-dīn, a Saphi or mystic philosopher, being expelled from Aserbāijān by the Turkoman ruler Jelān Shāh, established himself in Shīrwān. His grandson

906	1499	Isma'īl al-Sāfi bin Shāhīd Haidar, visited conquered provinces and assumed sovereignty of Persia and Khurāsān, 908-1502.
922	1525	Shāh Tahmasp bin Isma'īl.
963	1575	Shāh Isma'īl II. bin Tahmasp.
985	1577	Muhammad Khudabandah bin Tahmasp.
994	1585	Hāmasāh bin Muhammad, or Amir Hamā.
994	1585	Shāh Isma'īl bin Muhammad.
994	1585	Shāh A'ḥmāḍ bin Muhammad.
1039	1629	Shāh Saffi bin Saffi Mirzā bin A'ḥmāḍ.

A.H.	A.D.	
1062	1642	Shah A'bbas II. bin Shah Saif.
1077	1656	Soleiman bin Shah A'bbas.
1106	1694	Shah Hussain bin Soleiman, last of the Safis. Shah Tahmasp II. bin Shah Hussain, abdicated.
1193	1722	Mahmud, an Afghan, invaded Persia, and usurped.
1197	1725	Aschraf, an Afghan, defeated by Nadir Kuli.
1242	1730	Shah Tahmasp, nominally restored, murdered 1737.
1145	1732	A'bbas III. bin Tahmasp.
1148	1736	Nadir Shah, or Nadir Sultan, proclaimed king.
1160	1747	A'adil Shah, nephew and murderer of Nadir.
1161	1748	Ibrahim, his brother.
1163	1749	Shah Rukh, blinded, driven to Kharkana.
1163	1750	Soleiman, or Mirza Said Muhammad.
1163	1750	Ismail bin Said Mustafa, under regency of A'li Mardan.
1173	1760	Muhammad Karim Khan Zand, held power under title of Wakil.
1193	1779	Zeki Khan, usurped on his death, murdered by
1193	1779	Ahmad Pash Khan, son of Karim, blinded.
1193	1779	Sadik Khan, brother of ditto.
		A'li Murad Khan assumed the title of Wakil.
1199	1785	Jaffer Khan, son of Sadik, murdered.
1203	1789	Lutf A'li, his son, defeated by
1209	1794	Agha Muhammad Khan Kajar, as emir.
1211	1797	Pash A'li Shah Kajar, died 1834.

TABLE LXXII.—*List of the Patas, Afghans, or Ghori Sultans of Hindustan. Capital, Delhi.*

(Corrected up from the coins of the 'Pathan Kings of Delhi,' by the Editor.)

589	1193 <sup>1</sup>	1	Mu'iz-ud-din Muhammad bin Sam (587 <sup>2</sup> ) (1st Dynasty).
602	1206	2	Kuth-ud-din Al-bag.
607	1210	3	Arif Shah.
607	1211	4	Shams-ud-din Altamash.
630	1236	5	Rukn-ud-din Firoz Shah.
634	1236	6	Sultan Hisham.
637	1240	7	Mu'iz-ud-din Balban Shah.
639	1242	8	A'li-ud-din Mas'ud Shah (11).
643	1246	9	Nasir-ud-din Mahmud (12).
664	1260	10	Ghiyas-ud-din Balban (5).
686		11	Mu'iz-ud-din Kailash.
689	1290	12	Jahid-ud-din Firoz Shah, Khilji <sup>3</sup> (2nd dynasty).
695	1296	13	Rukn-ud-din Ibrahim (9).
695	1296	14	A'li-ud-din Muhammad Shah (12).
715	1316	15	Shahab-ud-din U'mar (10).
716	1316	16	Kuth-ud-din Mubarak Shah (1).
720*		17	Nasir-ud-din Khusr.
720*		18	Ghiyas-ud-din Tughlak Shah (3rd dynasty).
725	1325	19	Muhammad bin Tughlak (3).
752	1351	20	Firoz Shah bin Salar Rajah (1).
790	1388	21	Tughlak Shah II.
791	1389	22	Abdulkar Shah II.
793*		23	Muhammad Shah bin Firoz Shah.

<sup>1</sup> The dates of accession, as converted into the years of the Christian era, are calculated from the months in each Hijra year in which the several monarchs are determined by Sa'id Ahmed to have succeeded to the throne. The small figures in brackets indicate the months of each accession. The dates marked with a star are derived from coins, and do not coincide with our native author's historical deductions.

<sup>2</sup> See vol. i. p. 326.

<sup>3</sup> Zia Barani says 688 A.H.

A.H.	A.D.	
795*	24	Sikandar Shāh.
795*	25	Mahmūd Shāh bin Muhammad Shāh (Timūr, 800).
797	26	Nusrat Shāh Interregnum (coins dated 797, 798, 800, 801 and 807), Mahmūd restored, 802.
816	1413	Daulat Khān Lodī (1).
817	1414	Khizr Khān Sa'īd (4th dynasty) (3).
824	1421	Mubārak Shāh II. (5), coins extant with the date of 835 A.D.
837	1434	Muhammad Shāh bin Farid Shāh (7).
849	31	A'alam Shāh (2).
855	1451	Bahlōl Lodī (6th dynasty) (3).
894		Sikandar bin Bahlōl (7).
923	1517	Ibrāhīm bin Sikandar (Bāhar, 935 A.D.) (11).
937	1531	Muhammad Humayūn, Mughul (5). See Table LXXX.
946*		Farid-ud-din Shīr Shāh, Afghān (2).
952	1546	Islām Shāh (3).
960	1553	Muhammad A'adil Shāh (5).
962	1555	Ibrāhīm Sūr (6).
962	1555	Sikandar Shāh (Humayūn, 962 A.D.)

TABLE LXXIII.—*Patān or Afghan Sultāns and Governors of Bengal.*  
(*Pūrī dynasty.*) Capital *Lakṣmī, or Gaur.* (MARDEN.<sup>1</sup>)

600	1203	Muhammad Bakhtīār Khiljī, governor of Bihar under Kaṭh ud-dīn.
602	1205	Muhammad Sherān A'as ud-dīn.
605	1208	A'li Mardān A'īl ud-dīn.
609	1212	Hasan ud-dīn Ghīās ud-dīn.
624	1226-27	Nasir ud-dīn bin Shams ud-dīn.
627	1229	Mahmūd bin Shams ud-dīn, became Sultan of Hindustān.
634	1237	Tughan Khān, governor under Sultan Ilāsh.
641	1243	Tijl, or Tajl.
642	1244	Timūr Khān Kerān.
644	1246	Haif ud-dīn.
651	1253	Ibhtār ud-dīn Malik Yūsof.
656	1257	Jalāl ud-dīn Khānī.
667	1268	Taj ud-dīn Arāḳ.
669	1260	Muhammad Tātor Khān.
676	1277	Muiz ud-dīn Tughral.
681	1282	Nasir ud-dīn Baghra (by Dew written Kera), considered first sovereign of Bengal by some.
728	1325	Kadr Khān, viceroy of Muhammad Shāh.
741	1340	Fakhr ud-dīn Sekandar assumes independence.
743	1342	A'la ud-dīn Mubārak.
744	1343	Shams ud-dīn Muhammad Shāh Ulūk Bangarāh.
769	1358	Sikandar Shāh bin Shams ud-dīn.
769	1367	Ghīās ud-dīn An'ar Shāh bin Sekandar Shāh.
775	1373	Saif ud-dīn Sultān as-Salātīn bin Ghīās ud-dīn.
785	1383	Shams ud-dīn bin Salātīn as-Salātīn.
787	1385	Kānēr or Khama, a Hindu.
794	1392	Jalāl ud-dīn Muhammad Shāh (Chitmal bin Khama).
812	1409	Ahmad Shāh bin Jalāl ud-dīn. <sup>2</sup>
830	1426-7	Nasir Shāh (descendant of Shams ud-dīn Ulūk Bangarāh).
862	1457	Bārbaḳ Shāh bin Nasir Shāh.
879	1474	Yūsof Shāh bin Bārbaḳ Shāh.

<sup>1</sup> [See also *Ayīn-i-Akbarī*, vol. II., p. 16.]

<sup>2</sup> Marden remarks in a note: 'The coins show that the historical dates about this period are erroneous; but the means of correcting the mistakes are not sufficiently ample.' P. 562 'Numismata Orientalia.'

A.D.	A.D.	
887	1482	Sikandar Sháh.
887	1482	Fath Sháh.
896	1496-1	Sháh-rádash, a eunuch.
897	1491	Firoz Sháh Habshi.
899	1494	Mahmúd Sháh bin Firoz Sháh.
900	1495	Muzaffar Sháh Habshi.
903	1428	A'la ud-din Hussain Sháh bin Syed Ashraf.
927	1521	Nusrat Sháh bin A'la ud-din Hussain.
940	1534	Mahmúd Sháh bin A'la ud-din Hussain, defeated by
944	1537	Ferdí ud-din Shír Sháh.
945	1538	Humáyún held court at Gaur, or Jemshédd.
946	1539	Shír Sháh again.
952	1545	Muhammad Khán.
962	1555	Khán-Khán Bahádur Sháh bin Muhammad Khán.
968	1560-1	Jalál ud-din bin Muhammad Khán.
971	1563-4	Solaiman Karámi, or Karámi.
981	1573	Háyatí bin Solaimán.
981	1573	Dáúd Khán bin Solaimán, defeated by Akbar's forces.

TABLE LXXIV.—*Kings of the East, or Sharhi Dynasty of Jaunpur.*  
(PERSIAN.)

798	1394	Khwájah Jahán, Subahdár of Kanauj, Audd, Kora, and Jemphúr, assumed independence.
802	1399	Mubárik Sháh, his adopted son.
804	1401	Shams ud-din Ibrahim Sháh Sherki.
844	1440	Mahmúd Sháh bin Ibrahim.
862	1457	Mahammad Sháh.
862	1457	Hussain Sháh bin Mahammad bin Ibrahim Sháh.
881	1476	— took refuge in the Court of 'Alá ud-din of Bengal, where he died in 905, A.D.

TABLE LXXV.—*Muslimán Kings of Kashmir.* (PERSIAN.)

727	1326	Shams ud-din, Sháh Mir, minister of Samodava.
750	1349	Jamshíd, expelled by his youngest brother.
753	1351	A'li Shír, A'la ud-din; a severe famine.
765	1363	Shaháb ud-din; Shamsk invaded Sind.
783	1386	Kuth ud-din; defeats Rájá of Lakhót.
799	1396	Sikandar, Buhshikan; subverts Hindú religion.
819	1416	Amír Khán, A'li Sháh; civil wars; expelled by
836	1422	Zain ul Ab-ud-din, Sháid Khán, his brother.
877	1472	Haider Sháh, Rájá Khán.
878	1473	Hassan Sháh.
891	1486	Muhammad, a child; civil wars.
902	1496	Fath Sháh usurps the throne. Chákh tribe converted to Islam.
911	1505	Mahammad regains the throne; Ibrahim usurps.
942	1535	Nazuk Sháh; conquest of Emperor Humáyún, 948-1548.
948	1541	Mirza Haider Dughlat, governor under him; interregnum, and dissensions.
960	1552	Ibrahim II., set up by Daulat Chákh; earthquake.
963	1555	Im'ail, set up by Gházi Khán's party.
964	1556	Haláb, raised by Daulat Chákh.
971	1563	Hussain Sháh Chákh; embassy from Akbar.
986	1578	Yusaf Sháh Chákh, expelled by Góhar Chákh.
997	1588	— annexation of Kashmir to the Moghul Empire by Akbar.

TABLE LXXVI.—*Kings of Sind and Tatta.*

A.H.	A.D.	
87	706	Belochistan invaded by Hujaj, governor of Basrah, and Muhammad Kāsim.

The Anshir, the Samaras, and the Samanas or Jams, successively, gain the ascendancy, then a Dīhli governor.

1203: Nāsir ud-din Kabāchah, becomes independent.

## TABLE F.

[I have compiled the following list of the Arab Governors of Sind from Belādiri,<sup>1</sup> collated with and improved from Sir H. M. Elliot's excellent work on the Arabs in Sind.]

A.H.	
93	1 Muhammad bin Kāsim.
	2 Yazid bin Abū Kabāchah (appointed by Sulaimān).
96	3 Hishām bin Muḥabbah.
	4 A'mrū bin Muslim.
	5 Jund bin A'bd al rahman (under Hishām).
107	6 Tamim bin Zaid.
	7 Al ḥakam bin A'ḥnab.
	8 A'mrū bin Muḥammad.
	(Sulaimān bin Hishām—Abū Al-Khattāb) <sup>2</sup>
	Under the A'ḥnabides.
	9 A'bd al rahman bin Muslim, Al A'bdī, defeated by Mansūr bin Jambūr,
	the local Governor under the Umayyad Khalīf.
10	10 Mūsā bin Kā'ab, Alṭamīmī, overpowers Mansūr. (The <i>Tuhfat ul Kirām</i>
	attributes this victory to Dāūd bin A'ḥ.)
140	11 Hishām bin A'mrū.
	12 A'mar bin Ḥafṣ, Ḥaṣṣarīd. <sup>3</sup>
164	13 Kūb bin Ḥātim. <sup>4</sup>
184	14 Dāūd bin Yazid bin Ḥātim.
	15 Bashir bin Dāūd (about 200 A.D. Reinand).
213 <sup>5</sup>	16 Ghassān bin A'ḥd.
	Mūsā bin Yabīs, <i>Al Barmaḥī</i> (dies in 221 A.D.)
	A'mrū bin Mūsā. <sup>6</sup>
257	17 Y'akūb bin Laiz.

Subsequent division of Sind into the two principalities of Multān and Al-Manṣūrah.

TABLE LXXVII.—*The Jāmi Dynasty of Sumana, originally Rājpute.*

A.H.	A.D.	
737	1336	Jām Afrā; tributary to Tughlak Shāh.
740	1339	Jām Chohan.
754	1353	Jām Hanī; asserted his independence.
782	1380	Tīmājī, his brother.
782	1380	Jām Sālāh ud-dīn; converted to Muhammadanism.
793	1391	Jām Nisām ud-dīn.
796	1393	Jām A'ḥ Shāh.

<sup>1</sup> ['Abū Ja'afar Ahmad bin Yahya Ibn Jābir al Belādiri,' *op. cit.* 256 and 270 A.D. Ibn Khaldūn, p. 438. Reinand 'Fragments Arabes et Persans,' inédits relatifs à l'Inde.]

<sup>2</sup> [Appendix to the 'Arabs in Sind,' Cape Town, 1853. Elliot quoting 'Tuhfat ul Kirām.']

<sup>3</sup> [Transferred from Sind to Africa in A.D. 161. Reinand, p. 213.]

<sup>4</sup> [A.D. 160 to 161. Reinand.]

<sup>5</sup> [Gildemeister quoting Abūḥisā il. 150.]

<sup>6</sup> [Killed by عمر بن عبدالعزيز الهباري 'Belādiri.']

A.D.	A.D.	
812	1409	Jām Gīran, son of Tīmājī.
812	1409	Jām Pāth Khān.
827	1423	Jām Tughlāk; invaded Gujerāt.
854	1450	Jām Sikandar.
856	1452	Jām Sangar, elected.
864	1460	Jām Nārān, or Nīrām ul-dīn; cot. of Hasan Langa.
894	1492	Jām Faruz; the Turkhān family become powerful, 1520.
927	1520	Shāh Beg Argun occupies Sindh.
930	1523	Shah Husain Arghun.
946	1554	Mahmūd of Bhakar.
982	1572	Akbar annexes Sindh to the Empire.

TABLE LXXVIII.—*Bahmani Dynasty of Kalbarga, or Ahsonābād.*

A.D.	
1347	A'la ul-dīn Hasan Shāh gains Bahmani, servant of a Brahman in Muhammad Tughlak's court, antedates all the Dakhan.
1358	Muhammad Shāh B. I. (Ghāzi), makes tributary Telingana and Vijayanagar.
1375	Majāhid Shāh B., killed by his uncle.
1376	Dāūd Shāh B., assassinated by his nephew.
1379	Mahmūd Shāh I., youngest son of 'Alā; patron of literature.
1397	Ghānā ul-dīn; blinded and dethroned.
1397	Shams ul-dīn Shāh; puppet to Lalshāh, the Malik Nāib or regent.
1397	Pīrūs Shāh, married daughter of Vijayanagar raja, Deva Ray.
1422	Ahmad Shāh Wali (Khān Khāwān); war with rajas.
1435	A'la ul-dīn Shāh II., war with Vijayanagar.
1437	Humāyūn the cruel; general insurrection.
1461	Nīrām Shāh; raja of Telingana and Orissa powerful.
1463	Muhammad Shāh II.; Malwa power increasing.
1482	Mahmūd II.; loses Kanhan, Bijapur, and Berār.
1518	Abūshāh Shāh II., under control of Amir Burid, minister.
1520	A'la ul-dīn Shāh III.; deposed by ditto.
1522	Wali Ulah; murdered by ditto.
1525	Kallam Ulah, Bahmani dynasty of Bidar (Ahmadābād) terminates, and is succeeded by that of Amir Burid at Ahmadābād.

TABLE LXXIX.—*Burid Shāhī Dynasty of Bidar, or Ahmadābād.*

1402	Kāsim Burid, a Türk or Georgian slave.
1504	Amir Burid; held sway over northern kings.
1546	A'la Burid Shāh; first who assumed royalty.
1562	Urahim Burid Shāh.
1569	Kāsim Burid Shāh.
1572	Mirzā A'la Burid Shāh; deposed by his relative.
1599	Amir Burid Shāh II.

TABLE LXXX.—*Farukī Dynasty of Kāndesh. Capitale Tālmir and Būrkāmpūr.*

1370	Malik Rāja Farukī, receives the jagir of Tālmir, from Firuz.
1399	Malik Nasir or Nasir Khān Farukī, builds Būrkāmpūr.
1437	Mīrān A'āl Khān Farukī, expels Dakhnīs from Kāndesh.
1441	Mīrān Muḥarrīk Khān Farukī, peaceful reign.
1457	Mīrān Ghānā, or A'āl Khān Farukī I.; tributary to Gujerāt.
1503	Dāūd Khān Farukī, tributary to Malwa.
1510	A'zim Humāyūn, or A'āl Khān F. II.; grandson of Gujerāt king.
1520	Mīrān Muhammad Khān Farukī, succeeds to Gujerāt throne.
1535	Mīrān Muḥarrīk Khān Farukī, brother; war with Mughals.
1566	Mīrān Muhammad Khān Farukī, attack from Dakhan.
1576	Rāja A'āl Khān Farukī; acknowledges Akbar's supremacy.
1598	Bahādur Khān Farukī; defies Akbar; is imprisoned at Gwalior.



TABLE LXXXI.—*Kings of Málwa. Capital Dhár, Mándó or Shidábhá.*

A.D.	
1387	Sultán Dīlāwar Ghózi, governor, assumes title of Sháh, 1401.
1405	Sultán Hoshang Ghózi, or Alp Khán, his son, defeats Narsinha Ray.
1432	Ghazal Khán, or Sultán Muhammad Ghózi; poisoned.
1435	Mahmúd Khán, or Sultán Mahmúd Khálji. Rána of Chitor, Kumbhó presents tankas coined in his own name, 1450.
1469	Sultán Ghásim ud-din; peaceful reign.
1500	Sultán Nasir ud-din; his son, Sháháb ud-din, revolts.
1512	Sultán Mahmúd II., younger son, last of the Kháljis.
1534	Málwa incorporated with Gujerát kingdom.
1565	— annexed as a province of Akbar's Empire.

TABLE LXXXII.—*Kings of Gujerát. Capital Patan.*

1391	Muzaffar Sháh I.; appointed viceroy by Firuz Tughlak, A.D. 793, assumes independence in A.D. 799—A.D. 1296.
1411	Ahmad Sháh I., grandson, builds Ahmedábad and Ahmadnagar.
1443	Muhammad Sháh, surnamed Kartar, the merciful.
1451	Kutb Sháh; opposes Málwa king, and Chitor raja Kumbha.
1469	Dáúd Sháh, his uncle, deposed in favor of
1469	Mahmúd Sháh I. Begarrá; two expeditions to Dekhan.
1511	Muzaffar Sháh II.; war with Rána Sangá.
1520	Sikandar Sháh, assassinated.
1520	Nasir Khán, or Mahmúd Sháh II., displaced by
1520	Bahádur Sháh, invades Málwa; murdered by Portuguese.
1530	Mírán Muhammad Sháh Farúk, his nephew, of Málwa.
1538	Mahmúd Sháh, son of Latif Khán; released from prison.
1553	Ahmad Sháh II., a spurious descendant by minister.
1561	Muzaffar Sháh III. Bahá, a supposititious son of Mahmúd.
1572	Muzaffar Sháh submits to Akbar, and in 1585 Gujerát finally becomes a province of Akbar's empire.

TABLE LXXXIII.—*Kings of Multán.*

This province was first conquered by Muhammad Khán, at the end of the first century, Hijra. It was recovered by the Hindús on the decline of the Ghazni power. After Muhammad Ghózi's subjugation, it remained tributary to Dáhl until

A.D.	A.D.	
847	1443	Sheikh Yúsof established an independent monarchy.
849	1445	Ray Sehra, or Kutb ud-din Hussain Langá I.; expelled the Sheikh.
908	1502	Mahmúd Khán Langá; his minister, Jám Beyzá.
931	1524	Hussain Langá II.; overcome by Sháh Hussain Arghán. Under Humáyún, becomes a province of the empire (see below).

TABLE LXXXIV.—*Imád Sháhí dynasty of Berar. Capital, Ellichpur.*

A.D.	
1484	Fath Ulláh Imád Sháh, Bahmani, governor of Berar, becomes independent.
1504	A'la-ud-din Imád Sháh, fixes his capital at Gáral.
1528	Daria Imád Sháh, married his daughter to Hussain Nizam Sháh.
1560	Burhán Imád Sháh, deposed by his minister.
1568	Tufal Khán, whose usurpation is opposed from Ahmadnagar, and the family of Imád Sháh and Tufal extinguished.

TABLE LXXXV.—*A'adil Shāhi dynasty of Bijāpūr.*

A.D.	
1489	Yūsuf Khān, son of Amurath II. of Anatolia; purchased for the body guard at Ahmadābād.
1501	— on the death of Dastūr Dīnār assumes independent sovereignty as Yūsuf A'adil Shāh.
1511	Ismā'il A'adil Shāh. Goa taken second time by Portuguese.
1534	Mullū A'adil Shāh, a prodigal, deposed and blinded by
1535	Ibrāhīm A'adil Shāh I. Minister Rāmrāj assumes throne of Vijayanagar.
1557	A'li A'adil Shāh; war against the Hindū rājās.
1579	Ibrāhīm A'adil Shāh II. Chand bān regent.
1620	Muhammed.
1660	A'li A'adil II.

TABLE LXXXVI.—*Nizām Shāhi dynasty of Ahmadnagar.*

1490	Ahmad Nizām Shāh, Bharg, son of a brahmin of Vijayanagar; throws off Bahmani yoke.
1509	Burhān Nizām Shāh; petty wars with Berār, &c.
1533	Husain Nizām Shāh I.; confederacy against Vijayanagar.
1555	Murtazā Nizām Shāh, Dīwana, conquers Berār; smothered by
1558	Mirān Husain Nizām Shāh, put to death.
1580	Ismā'il Nizām Shāh, raised by Jumāl Khān Mohdavi.
1590	Burhān Nizām Shāh II.; constructs Kōrtā fort.
1594	Ibrāhīm Nizām Shāh, killed in battle.
1594	Ahmad, son of Shāh Tāhī, raised by chiefs; poisoned.
1595	Bahādur Nizām Shāh, proclaimed by Chand bān's party; imprisoned by Akbar.
1598	Murtazā Nizām Shāh II.; Nizām Shāhi dominions fall under the control of
1607	Malik Ambar.

TABLE LXXXVII.—*Kutb Shāhi Dynasty of Golkōnda.*

1512	Sultān Kutb Shāh, a Tātar, assumed title of king.
1543	Jamshīd Kutb Shāh, leagues with the Nizām Shāhis.
1550	Ibrāhīm Kutb Shāh, joins league against Rāmrāj.
1581	Muhammed Kutb Shāh, builds Bhadrnagar or Haidarābād; died 1586.
1611	Abdallāh Kutb Shāh, tributary to Shāh Jahān.
1672	Abū Hasan, imprisoned at Daulatābād.

Under Aurangzeb, the southern conquests were formed into six *Subahs*, viz.: 1, Kandish; 2, Aurangābād; 3, Bidar; 4, Berār; 5, Haidarābād; and 6, Bijāpūr.

TABLE LXXXVIII.—*Mughal Emperors of Hindustān.*

(Fourth descendant from Taimūr or Tamerlane, see Table LXX.)

A.D.	
899	Bābur, Zahir ud-din Muhammad (mounted throne 9th June).
937	Humāyūn, Nūr ud-din Muhammad (28th Jan.), in 946 defeated by Shīr Shāh. <sup>1</sup>
962	1554 " founded the Mughal dynasty of Dillī.
963	1556 Akbar, Abul Fath, Jalāl ud-din Muhammad (17th Feb.) consolidated empire.
1014	1605 Jehāngīr, Abul Muzaffar Nūr ud-din Muhammad (7th Oct.)
1037	1628 Shāhjahān, Shāhshāh ud-din Ghāzi (9th Feb.)
1068	1659 Aurangzīb A'laungīr, Abul Muzaffar, Mahī ud-din (24th Feb.)
1118	1707 A'zam Shāh, Muhammad Shāhid (3rd March).
1118	1707 Bahādur Shāh, Shāh A'alam, Abul Muzaffar Kutb ud-din (23rd Feb.)

<sup>1</sup> [10th Muharram, A.H. 947. Ferishtah.]

A.H.	A.D.	
1124	1713	Jahānār Shāh, Mū'iz ud-din (11th Jan.)
1124	1713	Farukhūr, Muhammad Shāhid Marhum (11th Jan.)
1131	1719	Rafī' ud-darjat, Shams ud-din (18th Jan.), (Abd berkit.)
1131	1719	Rafī' ud-daulat, Shāhshāh Sāni (26th April).
1131	1719	(Muhammad Nāseer), (May).
1131	1719	Muhammad Shāh, Abul fath Nāseer ud-din (28th Aug.)
1132	1720	(Sultan Muhammad Ibrahim), (4th Oct.)
1161	1754	Ahmad Shāh, Abul Naser (20th April).
1167	1749	Alemgir II., A'izz ud-din Muhammad (2nd June).
1173	1759	(Shāhshāh), (29th Nov.)
1173	1759	Shāh A'lām, Jalāl ud-din (Mīrā Abdallāh, A'li Oohar), (Nov.)
1201	1786	(Muhammad Badar bakht).
1221	1806	Akbar II., Abul Nasir, Moula ud-din Muhammad (3rd Dec.)

TABLE LXXXIX.—*Nizams of Hyderabad.*

A.H.	
1717	Nasir Jah, Nizam-ul-Mulk, usurped power on Aurangzeb's death.
1748	Nasir Jang, assassinated.
1757	Muzaffar Jang, ditto. Salabat Jang, killed by
1763	Nizam Ali, his brother.
1803	Sikandar Jah. English interference, 1807.

TABLE XC.—*Nawabs and Kings of Oude.*

—	Sa'dat A'li Khan of Kherwan, Nawab Vazir, under Muhammad Shāh.
—	Nasir Jang, ditto.
1766	Shuja' ud-Daulah, ditto.
1775	Kaif ud-Daulah.
1797	Spurious son, Vazir A'li, displaced for
1798	Sa'dat A'li, brother of Shuja', Vazir of Hindustan.
1814	Ghāsi ud-din Haider A'li, Shāh Zaman, king.
1827	Nasir ud-din Haider.
1837	Nasir ud-Daulah—Amjad A'li Shāh.
1847	Wajid A'li Shāh.

# ADDENDA TO USEFUL TABLES.

The paper on the Gold and Silver Currencies of India (pp. 69 to 92) was compiled, set up, and privately circulated in type in the month of October, 1856. As the period that has since elapsed has proved so calamitously exceptional both as regards the internal tranquillity and external commerce of the country, it has been deemed unnecessary to recast the memorandum, or to do more than complete the details as far as possible up to the present date, by the subjoined additional returns.

Page 81.—*Value of Gold and Silver coined in the Mints of the three Presidencies for 1855-56.*

CALCUTTA. Value in Co.'s Rs.		BOMBAY. Value in Co.'s Rs.		BOMBAY. Value in Co.'s Rs.	
Gold, 16,78,638	Silver, 3,87,62,223	Gold, 84,82,318	Silver, 2,55,21,982		

Page 82.—*Imports and Exports of Treasure (Gold and Silver) in each of the Presidencies of India, for 1854-55, 1855-56, 1856-57, at 2½ the Rupee (from a Parliamentary Return dated April 16, 1858).*

YEAR.	BENGAL.			MADRAS.			
	Imports.	Exports.	Net Imports.	Imports.	Exports.	Net Imp.	Net Exp.
1854-55	£ 645,123	£ 391,568	£ 253,557	£ 194,221	£ 321,814	.....	£ 327,593
1855-56	£ 5,479,534	£ 112,436	£ 5,367,098	£ 832,486	£ 70,739	£ 761,746	.....
1856-57	£ 6,428,573	£ 529,425	£ 5,899,148	£ 1,137,488	£ 78,477	£ 1,059,011	.....

YEAR.	BOMBAY.			TOTAL.		
	Imports.	Exports.	Net Imports.	Imports.	Exports.	Net Imp.
1854-55	£ 1,188,913	£ 353,654	£ 835,259	£ 3,025,258	£ 1,387,034	£ 761,223
1855-56	£ 4,965,947	£ 417,910	£ 4,548,037	£ 11,301,268	£ 691,176	£ 10,700,111
1856-57	£ 6,847,637	£ 645,525	£ 6,202,112	£ 14,413,608	£ 1,263,428	£ 13,150,170

Page 84.—*Value of Imports and Exports of Merchandises, from 1854-55 to 1856-57, from a Parliamentary Return dated April 16, 1858. The Return for 1854-55 is inserted, because that already given at Page 84 is only partially official.*

MERCHANDISE IMPORTED INTO THE THREE PRESIDENCIES.

	£
1854-55	12,742,670
1855-56	13,947,657
1856-57	14,194,586

MERCHANDISE EXPORTED FROM THE THREE PRESIDENCIES.

	£
1854-55	16,927,223
1855-56	23,039,268
1856-57	25,338,453

Page 86.—Table exhibiting the Sums paid into the East India Company's Treasury in London, on account of Railways in India, up to the 31st March, 1858.

NAMES OF COMPANIES.	Capital subscribed.	Total paid in.	Re-issued in England.
East Indian .....	10,731,000	7,757,949	4,543,910
Great Indian Peninsula .....	5,333,300	3,336,257	1,868,727
Madras .....	4,000,000	2,680,800	1,306,393
Sind, including Indus Flotilla and Punjab .....	2,730,000	954,151	272,540
Bombay, Baroda, and Central India .....	1,750,000	723,468	337,841
Eastern Bengal .....	1,000,000	35,000	.....
	26,544,300	15,496,605	8,330,010*

The following Statement, extracted from a Parliamentary Return, dated 13th April, 1858, shows the amount of Capital which it is estimated will be required for the Indian Railways sanctioned up to this time.

RAILWAY COMPANY.	Miles.	Estimated Outlay required to complete the several lines sanctioned.
East Indian .....	1,400	12,751,000
Eastern Bengal .....	130	1,000,000
Madras .....	740	8,000,000
Great Indian Peninsula .....	1,308	10,000,000
Sind and Punjab .....	360	2,500,000
Bombay, Baroda, and Central India .....	230	2,000,000
		£ 34,251,000

Page 88.—Assay produce of Silver Bullion received into the Mints of Calcutta, Madras, and Bombay, for 1855-56.

	Calcutta.	Madras.	Bombay.
Assay produce of Silver received from individuals .....	4,53,61,863	68,61,491	1,92,45,122
Value of uncurrent coins received from Treasury officers .....	44,98,206	3,70,938	10,60,480
Silver Coinage .....	3,87,62,323	54,62,316	2,56,21,962

\* Of this total the sum £1,860,276 has been disbursed as interest on capital.



# GENERAL INDEX.

[Where asterisks (\*) are inserted after the figures, the passages indicated will be found in the foot-notes.]

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